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# INTUSSUSCEPTION OF THE SMALL INTESTINE WITH SPECIAL REFERENCE TO MECKEL'S DIVERTICULUM AS A CAUSATIVE FACTOR*

BY MONROE A. MC IVER, M.D., F.A.C.S.†

## INTRODUCTION

CASES of intussusception involving the small intestine alone form a small but interesting group which presents features so distinctive that it should be considered apart from the more common types where both small and large bowels are implicated. That this separate grouping is not only of theoretical interest but also of considerable practical importance will be brought out later in a consideration of the diagnosis and treatment.

The records of the Massachusetts General Hospital contain histories of 81 cases of intussusception. Of this number, 12 (14.8%) showed involvement of the small intestine only. The monograph by Perrin and Lindsay[1] records 34 instances (10.1%) of enteric intussusception out of a total of 335 cases. Leichtenstern's[2] series of 593 cases shows a much higher incidence,—30%; but, as pointed out by Perrin and Lindsay, Leichtenstern's cases do not represent a consecutive series, but were largely selected from the literature,—a method always likely to show a high incidence of unusual cases. In considering any series, it should also be noted that since this type of intussusception occurs largely in older children and in adults, its reported incidence in the records of any given hospital would be greatly influenced by the ratio of children to adults admitted to the clinic. Since the cases here reported, and also those of Perrin and Lindsay, were drawn from the records of a general hospital it is probably safe to conclude that the incidence of intussusception involving the small intestine only is between 10% and 15% of the total cases of intussusception.

## ETIOLOGY

It is a striking fact that an organic basis for the occurrence of this type of intussusception is found in a high percentage of the cases. Of the 12 cases collected from the past records of the Massachusetts General Hospital and the one herewith reported, an organic pathologic lesion of the bowel was found in 8 instances. The lesions were classified as follows: hemangioendothelioma, 1; constriction of the gut, believed to be due to a tuberculous ulceration, 1; polypus, 3; Meckel's diverticulum, 3. In one of these latter cases an adenocarcinoma was present in addition to the Meckel's diverticulum. In Perrin and Lindsay's[1] series of 34 enteric intussusceptions, 11 showed organic pathology classified as follows: congenital constriction, 2; tuberculous ulceration of the gut, 2; polypus, 1; myomatous tumor, 1; Meckel's diverticulum, 5.

It is probable that an organic basis for enteric intussusception is present in an even higher proportion of cases than these figures indicate. Willis[3] points out, in his article on intussusception from benign tumors of the intestine, that it is reasonable to assume that many specimens of intestine removed at operations for intussusception, would, if carefully studied, show the remains of a tumor which had been largely destroyed by interference with its vascular supply. It has also been suggested that in certain cases an inflamed Peyer's patch might be the cause of the intussusception.

In the 19 cases considered above in which organic pathology was found, Meckel's diverticulum was reported in 8 instances, or in almost half the total cases. This is an exciting cause of such importance that it warrants consideration in some detail. In 1913, Hertzler and Gibson[4] collected 52 cases of intussusception in which Meckel's diverticulum was the causative factor, the number including one case of their own. In 1925, Lower[5] added 8 cases, including 2 of his own, bringing the total number reported up to 60. The case reported below illustrates a number of points in regard to this type of intussusception.

CASE HISTORY. R. M., male, white, aged 12. Admitted M. G. H. July 8, 1927. The history was meager and rather unreliable, since the boy was somewhat irrational and the mother spoke no English.

*Chief complaint:* Pain in the abdomen, and vomiting, of 2 days' duration.

*Present illness:* Early yesterday morning (40 hours before admission to the Hospital) the patient was taken with severe, generalized, abdominal pain. This was attributed to green apples eaten the day before. He vomited a number of times during the first day, and the pain persisted.

*From the Surgical Services of the Massachusetts General Hospital.

†For record and address of author see "This Week's Issue," page 488.

He was given castor oil, which he vomited. During the day of admission the pain was said to have been more severe in the right lower quadrant; he vomited 5 or 6 times, the vomitus being greenish in color and without odor. His bowels had not moved for two days previous. He had no symptoms referable to his cardio-respiratory or genito-urinary systems. His temperature was 104°, white count 27,000.

*Past history:* The patient is said to have had attacks of rather mild abdominal pain, lasting 15 or 20 minutes, during the past 8 months. He occasionally vomited during these attacks.

*Physical examination:* Physical examination showed a slightly built boy of twelve, apparently in considerable pain, excited and disturbed mentally. The abdomen was scaphoid in appearance, moving only slightly with respiration. There was marked muscle spasm over the whole abdomen, most marked on the right side. There was also marked generalized tenderness, perhaps somewhat more pronounced on the right side. No masses could be felt. Rectal examination was unsatisfactory because of lack of coöperation; definite tenderness, however, could be elicited.

It appeared obvious from the physical examination that we were dealing with some acute pathology in the abdomen requiring surgical treatment. It was thought most likely that this was a fulminating appendicitis, although intestinal obstruction was considered.

*Operation:* Under ether anaesthesia the abdomen was opened through a right rectus muscle-splitting incision. On opening the peritoneum, free fluid, slightly dark in color, escaped. On exploring with the hand, a mass was felt in the pelvis which on delivery proved to be an intussusception about 20 centimeters from the ileo-cecal valve. A few centimeters of the intussusception were reduced and the bowel found to be gangrenous. It was impossible to reduce the intussusception further, so the whole affected portion was resected. No anastomosis was attempted at this time, since the patient was in very poor condition: he took the ether badly; his pulse soon rose to 150; he became very cyanotic, and respiration stopped. Under artificial respiration breathing again started and no more ether was given. Clamps were left on the distal and proximal ends of the bowel and these were brought out through the wound, which was rapidly closed around it. At the end of the operation the patient was given glucose intravenously and was returned to the ward in fair condition.

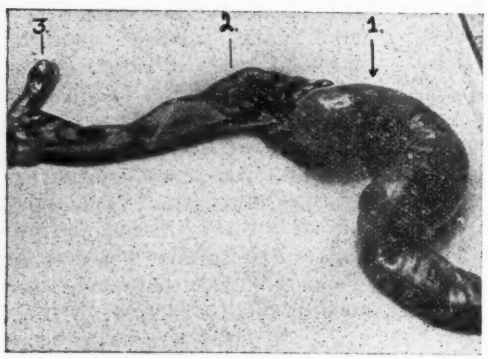


ILLUSTRATION I shows the specimen removed at operation. The intussusception has been partially reduced and the diverticulum everted. (1) intussusception; (2) a gangrenous portion of the bowel that formed a portion of the intussusceptum; (3) Meckel's diverticulum. At the time of operation the diverticulum was found inverted in the lumen of the intestine (see Illustration II); it was about 5 cm. long; the total length of intestine resected was about 35 cm.

The pulse and temperature remained elevated for several days after operation, gradually returning to normal. Clamps were removed from the bowel the second day post-operative, and drainage was free. There was some breaking down of the wound and digestion by the intestinal secretions; but the boy's general condition was good after he had recovered from the acute phase.

About 3 weeks after the first operation, the wound was opened, a few inches of the ends of the intestine were resected and an end-to-end anastomosis was carried out. The appendix, which was adherent in the region of the wound, was removed.

The boy was discharged 21 days after the second operation in good condition. He was seen again three weeks later and was in good health and symptom-free; he was planning to return to school the following day.

## THE MECHANISM OF INTUSSUSCEPTION RESULTING FROM MECKEL'S DIVERTICULUM

Illustration 2 shows the relation, in the case here reported, of the diverticulum to the intussusception. It will be noted, in the first place, that the diverticulum is inverted into the lumen of the intestine. In regard to this point, cases of intussusception associated with diverticulum have been reported (Porter[6]) in which there was no inversion of the diverticulum; but in the great majority of cases, including all of Hertzler and Gibson's, inversion of the Meckel's diverticulum into the lumen of the gut was present. These writers consider that the inversion occurs as a secondary process, but this seems most unlikely. To most authors the inversion has seemed to be a very important factor in the later production of the intussusception, and numerous speculations have been indulged in as to the method of its occurrence. Two theories stand out as being most plausible. The first is that an active peristalsis of the walls of the diverticulum, in an effort to expel its contents, brings about the inversion. The second, which has received considerable attention, is that an inflammatory process occurs around the opening of the diverticulum into the lumen of the intestine, producing a thickening of the walls of the diverticulum; and that this process extends until the mucous membrane protrudes into the lumen of the intestine where it is caught up and pushed along by the intestinal peristalsis. In the

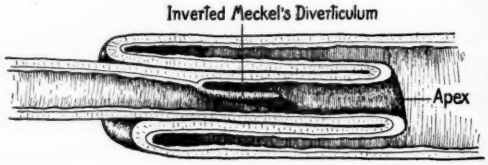


ILLUSTRATION II shows in diagrammatic form the specimen as found at operation. The Meckel's Diverticulum was inverted in the lumen of the gut. It will be noted that the diverticulum did not form the apex of the intussusceptum, but was attached near the proximal end.

case reported above, however, there was no evidence of an inflammatory process in the diverticulum.

In regard to the second point, namely the manner in which the intussusception is produced, it may be said that the mechanism is probably the same whether the foreign body attached to the intestinal wall be an inverted Meckel's diverticulum, an adenoma or a simple polypus. An explanation commonly offered is that the diverticulum or other tumor is dragged along by the peristaltic movements of the intestine, the point of attachment being thereby invaginated and forming the apex of the intussusception. Waddill[7] discusses this point (with reference to the intussusceptions caused by polypoid growths in general) and points out the fact that this theory cannot be upheld since in a number of cases the polypus does not form the apex. He believes the true explanation to be that there is a spasmodic contraction of the gut around the polypus and an inhibition of the part immediately distal to this; his article carries illustrations of this point. It is probable that some such mechanism is often responsible for the intussusception; and in the case here reported it will be noticed, both from the diagram and from the cut of the specimen removed, that the diverticulum was located some distance proximal to the apex of the intussusceptum. In some of the cases reported in the literature (Porter[6]), however, the inverted diverticulum does occur at the apex of the intussusceptum.

## DIAGNOSIS

There are certain findings which apply to enteric intussusceptions in common with other types of intestinal obstruction from any cause. The most important of these are vomiting, pain and distention.

*Vomiting.* Vomiting was recorded in all but one instance of the 13 cases operated upon at the Massachusetts General Hospital.

*Pain.* Abdominal pain was complained of by all the patients studied in this series of 13. The pain was very severe in character, bearing out the general belief that cases of intestinal obstruction in which there is interference with the circulation (volvulous, intussusception, etc.) are characterized by more severe pain than those where there is a simple blockage of the bowel.

*Distention.* In most of the cases of this series, the examination of the abdomen showed only slight distention; in only one instance was it described as marked.

The tenderness and muscle spasm which were recorded as present in five instances might be taken as suggestive of some interference with the circulation in addition to simple blockage of the bowel.

The temperature and leucocyte count were usually either normal or slightly elevated: the high temperature (104°) and leucocyte count (27,000), the marked muscle spasm and the tenderness shown by the case reported in this paper are unusual. This is borne out by a study of the literature.

The classical criteria relied upon to distinguish intussusception in general from other types of acute intestinal obstruction are the age of the patient, intussusception being the most common type of obstruction in infancy or early childhood; the passage of blood by rectum; the presence of a sausage-shaped tumor; and a history of previous attacks of pain. In the type of intussusception involving the small intestine only, any one or all of these distinguishing features may be absent, as brought out by the following analysis:

*Age.* All of the 13 patients in the records of the Massachusetts General Hospital were over ten years of age, the youngest being twelve, the oldest forty-five; average, 25.6 years. In Lower's[5] two cases the patients were forty-three and forty-four years of age. In the series reported by Hertzler and Gibson[4], the average age was 13; but in 20 of the 52 cases the patient was under ten years of age, the youngest being seven months. The age of the patients reported by Willis[3] varied from seven to sixteen years. Thus we see that while the condition can occur in early childhood it is most frequently met with in late childhood or in adult life.

*Bleeding.* Blood was passed by rectum in only three instances of the present series. In one instance the profuse hemorrhage reported undoubtedly came from the hemangioendothelioma which caused the intussusception. Most writers agree that the passage of blood is rather infrequent, due, doubtless, to the fact that the intussusception does not enter the cecum.

*Tumor.* In only three of the thirteen cases was an abdominal tumor felt; in only one instance was it described as sausage-shaped. In the Gibson and Hertzler series the incidence was higher, about 40% showing a tumor mass.

*Previous attacks of abdominal pain.* One symptom of importance in diagnosis, which is found with greater frequency in cases of enteric intussusception than in those of other types, is a history of previous attacks of abdominal pain. Such a history was obtained in nine out of the thirteen cases here discussed. The large number of cases with a history of relatively minor attacks of pain, ante-dating the acute attack by months or years, has been emphasized by most writers on this subject. The pain is usually described as cramp-like, located around the umbilicus or in the epigastrium.

This finding is important not only because it may give an indication as to the nature of the acute obstruction, but also because, as must be remembered, repeated attacks of abdominal pain may be caused by tumors of the small intestine. An exploratory operation had been performed in three of the nine cases referred to above, previous to the occurrence of the intussusception. The pre-operative diagnosis in one case was duodenal ulcer, because the pain was related to meals and referred to the epigastrium. The pa-

tient was explored two years before the onset of the intussusception: no ulcer was found; the appendix was removed; the attacks of pain continued. Later, a polypus of the jejunum was found to be responsible for the intussusception. A second case was operated on for "chronic appendicitis;" a normal appendix was removed. The acute intussusception occurred two months later, and a Meckel's diverticulum found to be responsible. The third patient had five hospital entries over a period of five years. His first operation was for acute appendicitis; two years later, because of symptoms of intestinal obstruction, he was explored for "post-operative adhesions," but no adequate cause for the symptoms was found. He had three later admissions with symptoms of partial intestinal obstruction, but no operation was performed. At a subsequent admission he was operated upon for intussusception; after reduction of the intussusception, polypi could be palpated in the jejunum; these were not removed because the patient's general condition was so poor.

### TREATMENT

The treatment consists in a laparotomy, a reduction of the intussusception if possible, and a resection of the involved bowel if it is not viable. A careful search should be made, after reduction, for any pathology of the bowel: an inverted diverticulum may be small and observed only as a dimple on the ante-mesenteric border, and if it is not excised a recurrence of the intussusception may take place.

In the present series of 13 cases there were 5 deaths. The onset of acute symptoms in these fatal cases was, in two instances, 24 hours before entrance to the Hospital; in the other instances, 5, 6 and 8 days before. Resection of the bowel was carried out in 4 instances, in 2 of which immediate anastomosis was done, in the other 2 the bowel ends being brought out through the wound. In the 5th case the bowel was believed viable and was returned to the abdomen; but this later proved not to be the case and the patient died following a secondary operation.

In one of the eight cases that recovered, the acute symptoms began only a few hours before admission to the Hospital. In 4 cases, 2 days elapsed between the onset of symptoms and admission to the Hospital; in one case, 3 days. In 2 instances it was difficult to determine how long the acute symptoms ante-dated the admission. A portion of the bowel was resected in five instances: an immediate anastomosis was carried out in 3 cases; in 2, the ends of the bowel were brought outside the abdominal cavity and the anastomosis performed at a second operation. The intussusception was reduced in 3 instances; in one of these cases the reduction was followed by an enterostomy.

### SUMMARY

In from 10 to 15 per cent. of all cases of intussusception the small intestine alone is involved.

An organic basis for the occurrence of the intussusceptions of the small intestine is found in a fairly high proportion of cases: 8 out of the 13 here discussed showed organic pathology responsible for the condition.

Among other pathologic lesions causing the intussusception, Meckel's diverticulum is frequently found both in our series and in the cases recorded in the literature. It is pointed out that the usual course of events in cases of this type is, first, an inversion of the diverticulum into the lumen, followed by a disordered peristalsis which is the immediate cause of the intussusception. The case reported illustrates salient features.

In a discussion of the diagnosis it is pointed out that while the classical signs which distinguish intussusception from other types of intestinal obstruction may be present, they are often absent. A history of previous attacks of abdominal pain is commonly given, and the importance of this is stressed.

A brief discussion of treatment is presented.

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## SUPRAPUBIC PROSTATECTOMY

BY JOHN M. BIRNIE, M.D., F.A.C.S.*

WITH the universal adoption of bladder drainage as a preliminary to removal of the hypertrophied prostate gland, a marked lowering of the mortality rate was accomplished and the applicability of operative measures was extended. This preliminary drainage is procured in one of two ways: either by catheterization or by suprapubic cystotomy. The use of the catheter, at first intermittently and later indwelling, is not without danger and in a considerable percentage of cases it cannot be employed at all. Successful catheterization, even in the favorable cases, depends very largely upon the skill with which it is utilized. It accomplishes its maximum benefit in a well organized urologic clinic where an especially trained personnel is in constant attendance. The great advantage of preliminary bladder drainage per catheter in suprapubic prostatectomy lies in one's ability to open the bladder so that all the steps in the removal

*For record and address of author see "This Week's Issue," page 488.

of the gland and the subsequent control of bleeding may be carried out under the guidance of the eye.

The difficulty in successfully instituting catheter drainage of the bladder and its absolute failure in many cases have led most surgeons to employ the so-called "two-stage" operation, the first stage being a suprapubic cystotomy with tubular drainage. As far as accomplishing its intended purpose is concerned, this preliminary cystotomy is satisfactory. The objection to the two-stage operation is chiefly directed against the second stage. In gaining access to the prostate it is necessary to work through the preliminary drainage sinus and even when it is enlarged, one works blindly and by means of the sense of touch. In order to overcome the difficulties of the two-stage operation as usually employed, the procedures to be described were evolved. In considering this new method, it should be clearly understood that all of the varying details, concerning which there is often a considerable difference of opinion, are not involved. Any one of the numerous methods of inducing anesthesia may be employed for either stage of the operation. After removal of the gland, bleeding can be controlled by any one of the various techniques advocated and the surgeon may exercise his own particular preference.

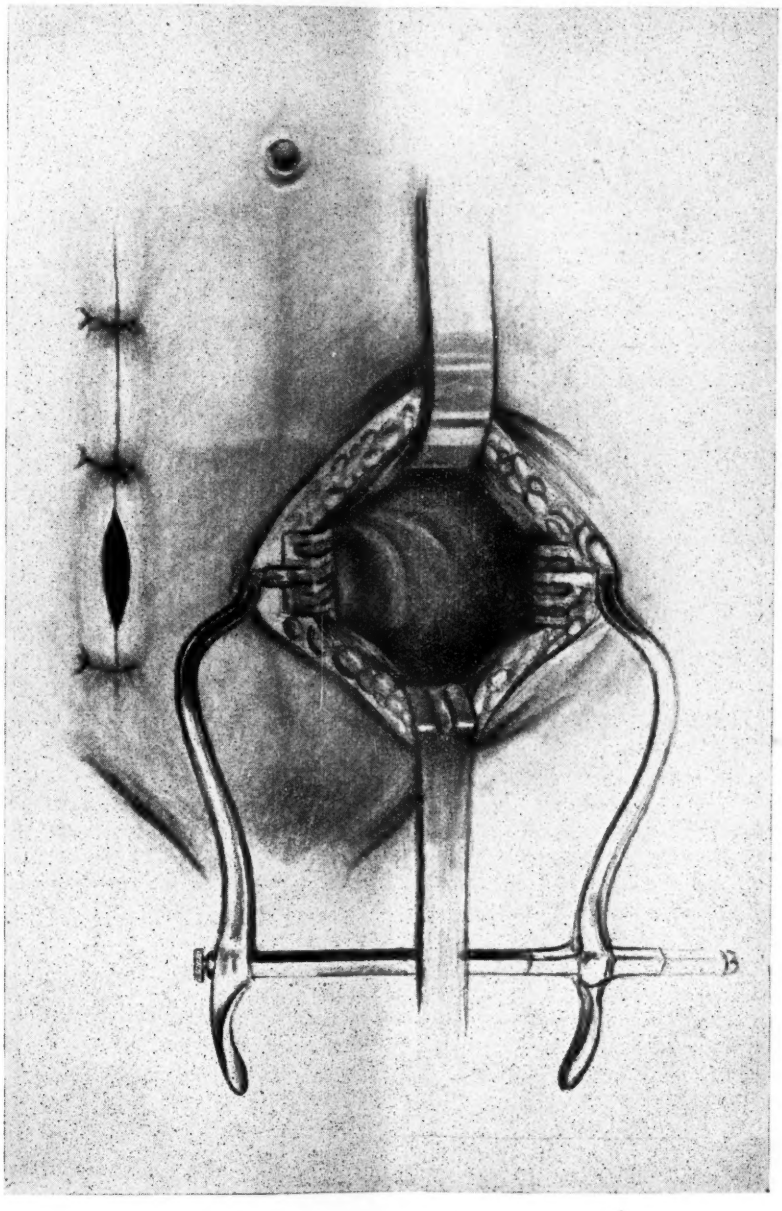

FIGURE I. Incision of first operation showing drainage sinus through right rectus muscle. Incision of second operation through left rectus muscle showing complete exposure of the prostate.

The operation is a two-stage procedure which consists of a preliminary suprapubic cystotomy with drainage and a subsequent suprapubic

prostatectomy completely visualized. The difference from accepted procedures lies in the approach to the bladder at the two operations. The cystotomy is performed as follows: Under some form of anesthesia an incision is made through the skin, beginning just above the symphysis pubis and extending upward for several inches.

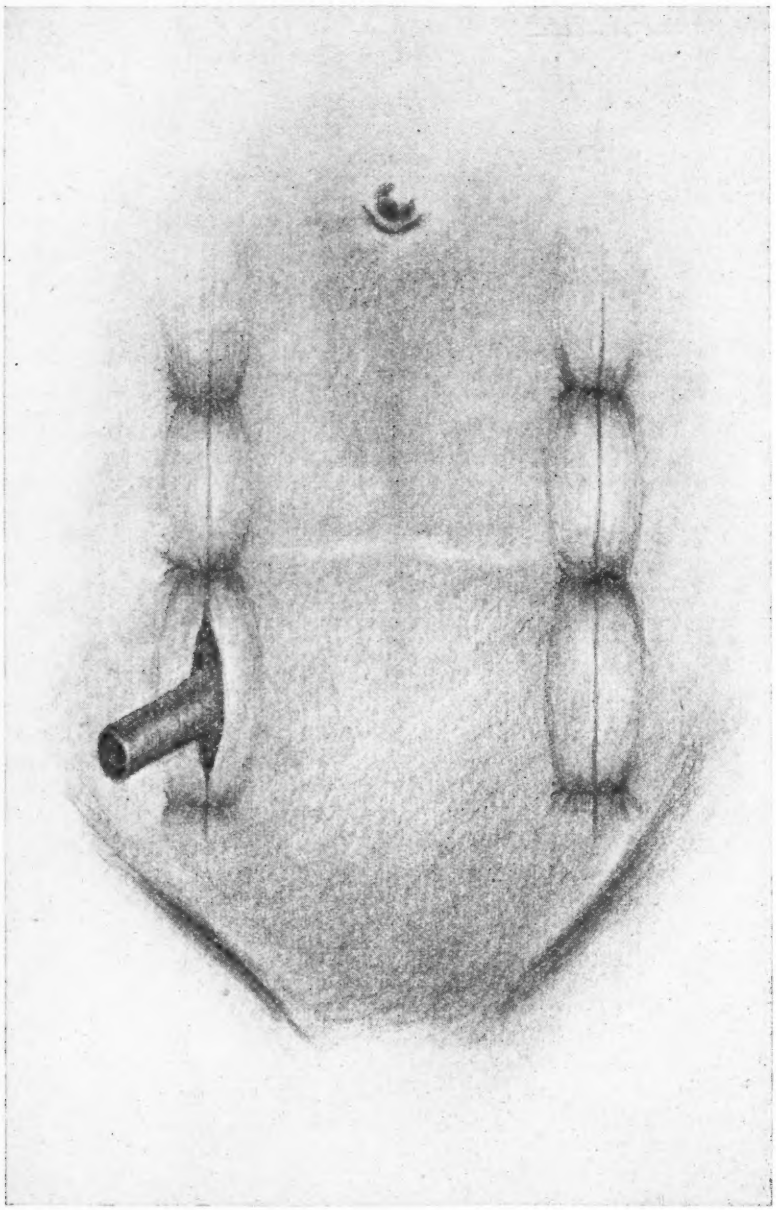

FIGURE II. Completion of second operation. Incision of first operation with drainage tube through original sinus in right rectus muscle. Complete closure of incision of second operation through left rectus muscle.

This incision is located one and one half to two inches to the right of the median line. The fascia of the rectus abdominis is incised the full length of the skin incision and the underlying muscle is split by blunt dissection. The two portions of the right rectus being properly retracted, the prevesical space is exposed. After wiping back the peritoneum and prevesical fat, the bladder is opened by the method most preferred by the individual surgeon. Previous distention of the bladder may have been induced if the operator so desires. In incising the bladder care is taken to keep the incision well out to the right side of the patient. The usual digital exploration of the bladder having been accomplished, a drainage tube of some sort is introduced and the bladder sutured tightly about it. The remainder of the wound is closed in layers with or without drainage to the space of Retzius. It will be seen that the cystotomy just described differs from the one usually performed in that the incision is some distance to the right of the median line rather than through it. When the patient's

condition warrants, the second stage, or prostatectomy proper, is undertaken.

The patient having been anesthetized, the drainage tube is removed and the operative field prepared. A new incision is made exactly like the one employed at the first stage, differing only in its location. The new incision is located one and one half to two inches to the left of the median line. The left rectus is split, as was its fellow of the opposite side, and the bladder incision is kept to the left. The two operative incisions are thus kept three to four inches apart and in no way interfere with each other. When making the second opening into the bladder, the following simple maneuver, while not essential, is of help: A small caliber urethral or a curved uterine sound is introduced into the bladder through the original drainage sinus and can be made to raise the bladder in the new wound so that it may be readily and safely opened. The bladder being open, suitable retraction is employed and the prostate is widely exposed to view and made readily accessible.

The gland is now removed by any one of the various methods advocated. Bleeding may be controlled by suture or ligature, if deemed advisable. If a haemostatic bag or packing is employed, the original drainage sinus is used as a means of exit from the bladder. This sinus is also used as the pathway for the introduction of tubular drainage. The new incision in the bladder is now completely closed and the remainder of the wound sutured in layers.

The entire two-stage operation, as described, may be briefly summarized as consisting of two cystotomies, the operative wounds of which are located several inches apart. One incision is used for drainage and the other for removal of the prostate, and the latter is closed tight. The two incisions do not interfere with each other in any way and do not complicate the procedure. By this method of operating, the advantages of preliminary suprapubic drainage of the bladder are obtained without sacrificing, in any way, the benefits of removing the prostate under the guidance of the eye, a procedure heretofore only attained with a one stage prostatectomy.

## TEAR-SAC SURGERY

### Depuy-Dutemps and Bourguet Technique. A Direct Anastomosis of the Tear-Sac With Nasal Mucous Membrane*

BY J. J. CORBETT, M.D., F.A.C.S.†

IN the tear-sac surgery of today there are two distinct objectives: the operation must relieve and prevent the recurrence of the infection; and it must banish for all time that ever-present and most annoying concomitant disturbance, epiphora. If an operation on the lacrimal drainage apparatus is not devised to accomplish this two-fold purpose, it should not be given any place in present-day ophthalmic surgery.

But why the emphasis on *ophthalmic* surgery? As a matter of fact, strange as it may seem, most of the progressive work along this line has been done by the rhinologist, and not by the ophthalmic surgeon, until Dr. Dupuy-Dutemps presented to the Ophthalmological Society of Paris in June, 1920, a description of his technique, which consists of a direct anastomosis of the lacrimal sac with nasal mucous membrane. And this man, Dr. Dupuy-Dutemps, is a real ophthalmic surgeon. He is the Ophthalmic Surgeon-in-Chief at the old (about 300 years) St. Louis Hospital in Paris, and also Chief Surgeon to the Ophthalmic Department of the Rothschild Foundation. At this latter institution he works in a decidedly modern environment with up-to-the-minute equipment.

Simple extirpation of the sac as a remedial measure in cases of chronic dacryocystitis is obsolete. As a surgical procedure it is not adequate; its end result is incomplete. It removes the infection, pus phlegmon; but it does not correct (other than in rarely exceptional cases) that most troublesome feature which is all important to the patient, the constant overflow of tears.

Instead of extirpation of the sac there are, at present, three outstanding methods, each of which is designed to relieve, not only the inflammation, but also the epiphora. These are: the West operation, the Toti operation (which has been improved by the Mosher modification), and the Dupuy-Dutemps and Bourguet operation.

The West operation is essentially an intranasal procedure. The Toti and Mosher-Toti operations present a combined intra and extranasal technique, while the approach in the Dupuy-Dutemps and Bourguet operation is entirely from the outside. The first two methods have met with a high degree of success. The statistics of the last would indicate an unusually satisfactory record of good results. When this operation becomes better known, it undoubtedly will make a very strong appeal to, and become very popular with the ophthalmic surgeons for three very good reasons: first, it is the only operation which preserves intact the lacrimal sac; second, it is the only operation which provides a definite means of maintaining the patency of the newly made drainage canal; third, it is the only operation which provides against the formation of granulations which defeat an

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†For record and address of author see "This Week's Issue," page 488.

otherwise successful technique. In addition to these features, the very high degree of success in clearing up both infection and epiphora will assuredly command attention.

It was the privilege and pleasure of the writer to observe the clever French ophthalmic surgeon, Dr. Dupuy-Dutemps, perform his operation on several occasions, both at the St. Louis Hospital and the Rothschild Foundation in Paris, during the Summer of 1925. He operated under local anesthesia, and had two well trained assistants in each institution. The average time to complete the operation was forty-five minutes, very evidently aided in a large measure by the ideal team-work.

He injected 2 c. c. of 2% novocain solution in adrenalin chloride along the line of incision; saturated a cotton plug with a 10% solution of cocain in adrenalin (1-1000) and placed it in the middle meatus of the nose near the anterior tip of the middle turbinate in order to produce an anesthesia and ischemia of the nasal mucous membrane. The plug remained in this position until the nasal mucous membrane was exposed by the removal of the lacrimal crest. This anesthesia was sufficient to last throughout the operation, and Dr. Dupuy-Dutemps stated in his paper of September, 1922, that he operated on a child thirteen years old with the same anesthesia without any difficulty whatever.

Illumination of the field of operation is an important factor, and Dr. Dupuy-Dutemps uses a concave illuminated head mirror, which throws sufficient light into the field. He considers this type of illumination indispensable.

The skin incision is that commonly used in all external sac operations, starting about ½ c. m. above the internal palpebral ligament, passing down over its bony insertion (about 5 m.m. to the inside of the inner canthus) in a line parallel to the lacrimal crest and terminating at a point opposite the entrance of the naso-lacrimal canal.

The internal palpebral ligament is cut, the superficial fascia, muscle, and deep fascia parted, the sac exposed and reflected outward as it is lifted out of its bony groove. The sac is retained in this position by means of a retractor, while a similar retractor holds the structures on the opposite side of the wound well over toward the median line. The retractors are held by one assistant while the other assistant works in the field with the operator.

The next step is the complete removal of the anterior lacrimal crest by means of a chisel. When the nasal mucous membrane is exposed, the bony opening is enlarged with a Citelli forceps, making an oval-shaped window with the long axis (10-12 m.m.) in the vertical plain; the transverse diameter varies from 8-10 m.m.

At this point a longtitudinal incision is made in the wall of the sac; the pus or mucus, if present, is removed, and the inner lining of the sac is swabbed with tincture of iodine. The nasal plug is then removed. A vertical incision is made in the nasal mucous membrane, equal in length, and directly opposite the sac incision. Three sutures of 000 catgut are passed through the posterior tip of the nasal mucous membrane with the help of a small semi-circular Deschamps needle. These three sutures are held taut while a cut 2 m.m. long is made at a right angle to the upper and lower ends of the vertical incision. This gives a flap which facilitates approximation to the posterior lip of the sac. These three sutures are now drawn through the posterior lip of the sac incision by means of a small Reverdin needle, tied and cut close. Thus is formed the posterior wall of the new lacrimal drainage canal.

After the same fashion three more 000 catgut sutures are passed through the anterior lip of the nasal mucous membrane with the Deschamps needle, held taut while the right angle cuts (similar to those in the posterior lip) are made. These sutures are now drawn through the anterior border of the sac, and, in addition, through the periosteum and overlying soft tissues. The sutures are then carefully tied. It is this last little feature of the Dupuy-Dutemps technique, (the suspending of the anterior wall of the canal to the overlying tissue) which aids in maintaining the patency of the new lacrimal canal.

Three silk sutures close the skin incision. An ordinary eye bandage is applied but there is no intra-nasal dressing. Sutures are removed on the fifth day, and on the eighth day the bandage is discontinued.

Dupuy-Dutemps and Bourguet in their paper "Cure de la Dacryocystite chronique et du Laroiement par la dacryo-rhinistomie plastique" published in *La Presse Medicale*, September, 1922, reported operations on 150 cases. They were able to check up on 115 patients who returned for observation with the following results:

| | |
|---|---|
| Complete failure (without return of dacryocystitis) | 4 |
| Partial success | 7 |
| Complete cure | 104 |

In the classification of "complete failure" they included those cases in which there was total obliteration of the newly-made orifice with the epiphora persisting but no suppuration. In other words, the cases included in this classification present results similar to those following extirpation of the sac.

"Partial success" refers to those cases in which it can be demonstrated by an injection from a syringe that there is really an anatomic communication, but one which is not physiologically capable of the normal evacuation of tears. The epiphora persists, and a colored solution dropped into the conjunctival sac does not drain into the nose.

"Complete cure" is applied only to those cases in which there are no longer any signs

of epiphora, and in which the physiologic permeability of the lacrimo-nasal communication can be demonstrated by the spontaneous passage into the nose of a colored solution which has been instilled into the conjunctival sac. These requirements come pretty close to measuring up to the normal drainage of the lacrimal secretions.

Out of 115 cases which had been checked in 1922, 104 showed total relief of dacryocystitis and epiphora, or about 90%. In June 1925, Dr. Dupuy-Dutemps stated that, to date, he had done about 500 operations with total relief in 97% of the cases. This is an unusually high percentage of cures, higher, in fact, than accomplished by any other operation performed for this purpose.

Since September 1925, it has been possible for the writer to bring to the operating table only 31 cases of chronic dacryocystitis in patients whose histories have varied from one to fifteen years' duration. Two of these patients had double chronic dacryocystitis, making the total number of operative cases 33. These cases were done under ether and with the profuse bleeding which always accompanies this kind of anesthesia. For illumination, the Cameron headlight was used; otherwise, the technique above described was followed as closely as possible.

All of these cases were followed for one month, at the end of which time all could be classified as "complete cure" with the exception of three cases. Of these three cases, one was a "complete failure" and the other two would come under the classification of "partial success."

Dupuy-Dutemps and Bourguet reported the results of their operation on several occasions between June 1920. and May 1924*; and in addition at a conference in Barcelona in February 1925, gave statistics on 420 cases.

As far as can be ascertained, the writer is giving the first description of their technique with a report of a series of cases which has been published in English.

Personal observation of these few cases, together with the very high percentage of success reported by Dupuy-Dutemps and Bourguet, leads to the belief that here is a method for relief of chronic dacryocystitis and its attendant epiphora well worth while copying, developing, and perfecting by ophthalmic surgeons.

* "Note preliminaire sur un procede de dacryocysto-rhinostomie", *Soc. d'Ophthal.* de Paris, June 1920; "Procede plastique de dacryocysto-rhinostomie et ses resultats", *Ann. d'Oculistique*, Avril 1921; "La dacryocysto-rhinostomie plastique et ses resultats", *Soc. franc. d'Ophthal.*, Mai 1921; "Cure de la dacryocystite chronique commune et du larmoiement par la dacryocysto-rhinostomie plastique", *Acad. de Med.*, Novembre 1921; "Cure de la dacryocystite chronique et du larmoiement par la dacryo-rhinostomie plastique", *La Presse Medicale*, Septembre 1922; "Statistique de 299 cas", *Soc. franc. d'Ophthal.*, Mai 1924.

## CHARLES KNOWLTON'S REVOLUTIONARY INFLUENCE ON THE ENGLISH BIRTH RATE

BY NORMAN E. HIMES†

EVER since man began to wrestle with natural forces on this planet, at least a few things of real importance have profoundly modified the civilization he has been trying to build. Among these may be mentioned the invention of the wheel, of gunpowder, of printing, the harnessing of productive forces which one associates with the Industrial Revolution, as well as that newer economic revolution, in which America at the moment happens to be leading the world, aiming at a more equitable distribution of wealth. One does not need to possess a particularly keen sense of reality to recognize the indubitable fact that these events have had, and are having, a radical influence upon our civilization and our welfare.

I assert that the invention of methods of controlling conception must take co-ördinate rank with any of the forces just mentioned. Julian Huxley has described this new social force as "one of the few important biological inventions made in historical times." He adds that "the discovery of anaesthetics and that of various methods of killing or weakening the action of harmful bacteria are the only others that are in the same street with it," while Sir William Beveridge, a leading English economist, has put himself on record as believing that "the years about 1880 [i. e. the years about which the English birth-rate began to decline] are an epoch in human history as important as those which witnessed the introduction of gunpowder or the printing press." Any social force as significant for social progress or for social retrogression as contraception demands more serious attention than it has yet received.

In this paper, however, I intend to confine my remarks to one point, namely, to the primary rôle which an obscure and forgotten western Massachusetts physician [Charles Knowlton (1800-1850)], has played in England in the procreative revolution known as the declining birth-rate. One need not labor the point that such a metamorphosis is upon us and that it will bring with it changes of importance. In England the birth-rate began to take a new turn downward in the years 1876-1880 (allowing a margin of a few years for the delicate problems associated with the accuracy of birth registration). So general has this decline now become that it characterizes the vital history of the nations of the civilized world. Sir Bernard Mallett, the English Registrar General, Sir Ar-

†For record and address of author see "This Week's Issue," page 488.

thur Newsholme, the vital statistician, and Sir William Beveridge, to mention only a few, agree that the considerable decline has come about in the main owing to the diffusion of contraceptive knowledge in the period 1876 to the present. Other theories to the effect that the decline has been due to mystical factors such as "race physiology", or to an increase in involuntary sterility have never gained material acceptance with population authorities. Nor have there been appreciable changes in the age composition of the population, in the marriage rate, or in the proportion of women of child-bearing age to the general population. These factors, then, cannot account for the decline. The only explanation that will meet all the facts is that there has been a great increase in control over conception.

The decline of the English birth-rate in the period 1876-1927 has been notable. During 1876, (the peak year,) the birth-rate stood at 36.3 per thousand. For the last quarter of 1927 it was 15.4, while the low figure of 16.7 was reached as an average for the whole year. In a word, the birth-rate has been halved in fifty years.

Although this change has been an adaptive response to the requirements of a new mode of life brought about by many long-run social and economic forces, it is, nevertheless, true that the declining birth-rate in England has been, in a measure at least, the result of the personal work and influence of Dr. Charles Knowlton. While the Industrial Revolution, by automatically raising standards, gave an additional impetus to the motives for family limitation; while the loosening of the bonds of religious orthodoxy, the rise of Rationalism, Utilitarianism, and of popular education have cleared away impediments to its introduction into society; and while the "emancipation" of women and Feminism have reinforced both the motives and the tendency, the proposition is demonstrable nonetheless, that the decline in the English birth-rate has been made possible to a considerable extent by the personal efforts of a small group of individuals in which the name of Charles Knowlton will forever hold a conspicuous place.

The record of this interesting, not to say extraordinarily influential personality in the history of medicine has found no place either in our histories of medicine or in general or medical dictionaries of biography. Although I cannot enter here into the details of Knowlton's life—that will be treated *in extenso* in a work which I hope to publish in a few years entitled "A Documentary History of the English Birth Control Movement: 1820 to the Present Day"—a few words about his career may not be amiss.

Knowlton's English ancestors first set foot on American soil about twenty years after the landing of the Pilgrims. More immediately, Charles Knowlton (1800-1850) was the son of Stephen Knowlton, a farmer [second son of Ezekiel Knowlton, Sr., (1736-1810) a Revolutionary war captain] and of Comfort White of Phillipston, Massachusetts. He was born on May 10, 1800, at Templeton, Massachusetts, and died suddenly of angina pectoris in Winchendon, Massachusetts, on February 20, 1850.

Knowlton's early life was spent on his father's farm and in performing odd services in an attempt to finance his medical education. Although he possessed little formal education Knowlton achieved a medical training by studying with various practitioners in Massachusetts and New Hampshire and by attending the courses of medical lectures at Dartmouth. Surmounting the difficulties of an impecunious student, he received the M.D. degree in 1834 and a few years later became a fellow of the Massachusetts Medical Society.

On the 17th of April, 1821, he married Tabitha F. Stuart of Winchendon. The next few years were spent in several western Massachusetts towns, notably in Hawley, Adams, and Ashfield. He did little settling, however, and less practicing. Mentally preoccupied with the problems of Materialism, he published in 1829 his "Modern Materialism." While it had little influence, it is useful (as is his scattered published correspondence) in revealing to us the extent of that religious heterodoxy and independence of opinion which was soon to make his life personally uncomfortable but socially all the more useful.

The partial biography of Knowlton, which appeared nearly eighty years ago in this journal's predecessor, the *Boston Medical and Surgical Journal*, and which was based on case books containing biographical material, carried the events of his life down to 1830 only. The account made no mention of the fact that he was the first American physician to write a treatise on what is now popularly known as "birth control," and, in the nature of the case, it could not deal with his influence upon English civilization, since, as I shall presently show, the greater part of that influence was exerted after his death.

In 1832, Knowlton left an imprint on English life by virtue of the anonymous publication, of the first edition of "The Fruits of Philosophy; or, the Private Companion of Young Married People," ["By a Physician," New York, 1832], of which no copy seems to have survived. The date of the first edition which was gleaned from a court record of its first prosecution in Taunton, Mass., in 1832, is thus set back one year from the date commonly accepted as the correct one. A second edition [32 mo.], of which a unique copy is preserved in the treasure room of the Harvard College Library, was published undoubtedly by Abner Kneeland of Boston in 1833. Other American editions followed until the ninth of 1839. In 1877 a group of Boston physicians, connected I believe with the Harvard Medical School, thought well enough of the work to reprint it in a special subscription edition. Of this edition two copies are known to be extant, one

being at the Harvard Medical School and the other in the author's collection.

While the *Fruits of Philosophy* was characterized by a few idiosyncracies of phrase, it was, on the whole, a temperate discussion of the desirability, on medical, economic, and social grounds, of putting into the hands of married people the means of controlling conception. The first chapter (of the second American edition) bears the title: "Showing how desirable it is, both from a political and social point of view, for mankind to be able to limit at will, the number of their offspring, without sacrificing the pleasure that attends the gratification of the reproductive instinct." Chapter II is devoted to an elucidation and criticism of various theories of generation and to a presentation of the author's own theory. In Chapter III ("Of Promoting and Checking Conception") there are discussed four methods of conception control, one group of which (the chemical checks) Knowlton believed—mistakenly, I think—to be original with him. Other chapters elaborated the author's views on the social aspects of the problem. The appendix is notable in that it quoted Richard Carlile's "Every Woman's Book" (London, 1826) showing that the first book in the English language exclusively devoted to birth control was known in America at that time (1832-33).

At Taunton, Knowlton was fined fifty dollars and costs ($27.79) for publishing his book, while at Cambridge, Massachusetts,—upon the complaint of a Lowell physician—he was sentenced on December 10, 1832, to three months imprisonment at hard labor. The sentence, which he served, aroused very little public attention, and there was no organized protest save that issuing from a small band of Free Inquirers in Pittsburgh. A few newspapers, however, thought the punishment both excessive and unwise.

Prosecutions did not stop the sale of the work, the circulation of which Knowlton avows he carefully restricted. Kneeland continued to advertise and sell it not only at his office but through his agents. At least three thousand copies were sold in a year and half, while a pirated edition (no copy of which is known to be preserved) was also circulated.

At the Greenfield prosecutions (1834-1835), which originated with an Ashfield clergyman, the case against Knowlton and his medical partner (Dr. Roswell Shephard) was *nol prossed*. For upon two previous occasions the jury had been unable to agree. With this decision there were no more prosecutions in America, although there was to be a noisy one in England some years later. Shortly after the publication of the matured edition of 1839 the work seems to have been forgotten in this country until the trial about to be dealt with revived interest in it.

Far from being forgotten as in America, the work was destined in England to create something of a sensation. While up to 1839 probably not more than 10,000 copies were sold here, hundreds of thousands were ultimately to be sold in England. Moreover, the prosection of 1877-79 known as the case of *Regina v. Charles Bradlaugh and Annie Besant* was destined to stimulate public interest in still other works of the same kind, to increase the circulation of such tracts enormously, and even to create a market for, if not actually to cause the introduction of, a more effective contraceptive.

Reprinted as early as 1834 by James Watson, the London publisher of Freethought literature, the work was issued also by Austin Holyoake, Holyoake & Co., F. Farrah, and Charles Watts. For forty odd years this six-penny pamphlet circulated quietly in the relatively small quantity of only a thousand a year—this despite the fact that the work was regularly advertised in the columns of the leading Freethought journals of the period. Between 1834 and 1876 the circulation of all the English editions approximated 42,000 copies.

The publicity attending the trials of Bradlaugh and Besant, however, changed this quiet but limited percolation into something hardly less than an inundation. The circumstances which brought about this increased rate of diffusion of birth control information may rapidly be summarized as follows: One Henry Cook of Bristol, who (it has been alleged) interleaved obscene pictures with a Watts edition of Knowlton's pamphlet, was, as a consequence, sentenced to two years imprisonment at hard labor. Charles Watts, the London publisher, was in turn prosecuted, but upon pleading guilty, got off comparatively easily. However, Charles Bradlaugh, (an avowed Neo-Malthusian since the 'sixties) editor of the *National Reformer,* and Annie Besant, his co-worker in the Freethought movement, believed the pamphlet to be not only decent but highly useful. They felt that if their Freethought predecessors, whom they were accustomed to laud and esteem, had been distributing obscenity for the past forty years, and if their generation had just awakened to the fact, the less that was said about those predecessors the better. A test case seemed necessary in order that the legality of the sale of the pamphlet might be determined. Having resolved to defend the right of publishing Knowlton's work, Bradlaugh and Besant organized the Freethought Publishing Company for the express purposes of reprinting the pamphlet and pushing its sale. The London police were notified of the time and place of intended distribution. Upon arrest, the defendants were first tried at the Guildhall. After the case was taken to the Central Criminal Court it went to the Court of Queen's Bench (High Court of Justice) on a *writ of certiorari* and was there tried before Lord Chief Justice Cockburn. A lucid and cogent argument on the desirability of getting contraceptive information to the poor was presented by Mrs. Besant, while Bradlaugh, who was an able lawyer, was successful in quashing

a somewhat adverse decision. In this manner the case of *Regina v. Charles Bradlaugh and Anne Besant* ended victoriously, and the right of publication was vindicated.

The effect of this last prosecution of the Knowlton pamphlet was electric. Its circulation increased rapidly. In three years and a half (up to August 28, 1881) 185,000 copies of the Bradlaugh-Besant edition were sold at six pence each. The publicity of the trial caused other editions to be brought out in such provincial towns as Sheffield, Wakefield, and Newcastle. Others reprinted it in London and possibly additional English editions were issued that I have not been able to trace. French and Dutch translations appeared. I should estimate that the sales of the miscellaneous English editions, other than the Bradlaugh-Besant edition, reached 50,000 to 100,000. Adding the smaller figure to the circulation reached by the Bradlaugh-Besant edition, we have a total of 235,000 attained in a relatively short period. If one were to include the English circulation reached before 1876 (42,000), the total would be 277,000.

How much the notoriety of this legal tussle increased the sales of a score of similar tracts we have no means of ascertaining, but there is every reason to believe that there was a substantial upward movement in the numbers distributed and that this was out of all proportion to the increase in the numbers and the literacy of the population. The *National Reformer*, in reprinting full accounts of the trial in the Guildhall, mentioned the titles of many other books giving similar information, some issuing from esteemed publishers. The circulation of these may have been increased.

Shortly after the right of publication had been assured, the Knowlton pamphlet gave way to Anne Besant's "The Law of Population", which elucidated even more ways of controlling conception than the "Fruits of Philosophy." This was first issued in January, 1879, to replace Knowlton's tract which was much out of date. Two points are significant in connection with my thesis that Knowlton's work had much direct and still more indirect influence upon the English birth-rate. They are (1) that the publication of "The Law of Population" was one of the results of the prosecution of the Knowlton pamphlet; (2) that up to 1891—that is, within twelve years—*at least* 175,000 copies were sold in England at six pence each before it was withdrawn when Mrs. Besant became a theosophist and renounced her Neo-Malthusian views. At that time other publishers, wishing to continue the sale, offered a liberal sum for the copyright, but Mrs. Besant refused to sell it. It was reprinted in America, however, as well as in Australia, where an unsuccessful attempt was made to prosecute it. It is also worthy of note that this and similar pamphlets were sometimes bound together with advertisements on separate sheets stating where the reader could procure modern contraceptive supplies.

It is not at all unlikely that the Knowlton trial was responsible for the introduction into England of modern contraceptives. The advertisements mentioned above frequently offered for sale these appliances and are the first English advertisements dealing with them that I have seen. I am informed that Dr. Henry A. Allbutt, who later suffered some rough handling by the Medical Council, was responsible for the introduction of some of these appliances. The date is probably the early 1880's. While I do not consider the point established that Dr. Allbutt is responsible for this innovation, I consider it clear that if the Knowlton prosecution did not actually cause the introduction of these appliances, it certainly created a market for them and paved the way for their popularity.

Returning to the extent of the circulation of contraceptive literature given currency by virtue of the notoriety of the prosecution of Bradlaugh and Besant, one finds that in the period 1876 to 1891 a minimum of 410,000 copies of only two pamphlets were distributed. This figure includes the circulation only of the "Fruits of Philosophy" and the "Law of Population." In this sum of nearly half a million I have not included the 42,000 copies of the former circulated between 1834 and 1876. Nor have I added an estimated increase in the circulation of many other works of similar nature such as Robert Dale Owen's "Moral Physiology." This able and virtuous tract, which was reprinted by Edward Truelove, was the subject of a successful prosecution in 1878. It was during the mid-part of the century, and particularly in the seventies and eighties, that Dr. George Drysdale's "Elements of Social Science", first published in 1854, was making notable strides toward reaching its ultimate goal of thirty-five English editions and translations into at least ten European languages, these foreign editions, in turn, going through several printings. Not many years after the Knowlton trial, Dr. H. A. Allbutt published

"The Wife's Handbook". How many were sold in the eighteen eighties I have no means at present of ascertaining; but I know that the pamphlet has now passed the half million mark. This figure represents sales; it was never gratuitously distributed. One might go on to trace the circulation of numerous other books and tracts, some of which had been quietly circulated to a modest extent before the trial but which suddenly found a more interested reading public consequent upon the Bradlaugh-Besant prosecution. I am certain that not less than a million tracts furnishing elaborate contraceptive information were sold between 1876 and 1891. I am inclined to the belief that two million would be the more accurate figure. Upon another occasion I hope to show that approximately six to eight million books and tracts giving such medical details have been distributed in England in the period 1918 to 1927. Since the war there has been a great increase in interest in the subject and the figure of two million for the period 1876 to 1891 would seem by comparison conservative.

If this literature was bought to this extent, how extensively was it read? Is it not reasonable to suppose that the pamphlets were passed around to a certain extent? If we assume that the heads of two households received this information for every pamphlet purchased, approximately four million married couples secured the knowledge requisite to limiting their families. Many of these pamphlets doubtless went no further than the household of the purchasers. To offset this consideration is the well established fact that women frequently broach such matters in discussions among themselves.

These considerations, however, are not essential to the validity of my thesis. Even if they must be denied, there is still reasonable support for the thesis that the diffusion of contraceptive information in the period studied was extensive; that presumably many acted upon the newer knowledge and began limiting their families; that while it is possible to exaggerate the rapidity of this change, it is true that the prosecution of the Knowlton pamphlet enormously accelerated it; and that, in so far as these propositions are true there are also grounds for the contention that Charles Knowlton, the obscure Massachusetts physician, had a most significant influence, directly and indirectly, upon English civilization.

## UNITED STATES PUBLIC HEALTH SERVICE

### Sunlight Beneficial to Health, But Extensive Sunburn Should Be Avoided

Almost every new discovery in the scientific or medical field becomes a fad and is often carried to the extreme. Scientific workers have recently shown the necessity and importance of sunlight for the maintenance of the health of children and adults. The beneficial action of sunlight in the cure of certain diseases of children and adults has also been pointed out.

One of the things which have been advocated a great deal recently, and which has proven of much benefit for chlidren, is the sun bath. These sun baths are healthful not only because the child receives the beneficial direct rays of the sun but also because of the fresh air which it is thus bound to receive regularly.

Scientists have shown that direct sunlight not only prevents rickets, but, if given regularly, will ward off many of the illnesses which are common in children. Tuberculosis would suffer a sharp decline among children if all mothers gave this simple treatment to their children.

In giving sun baths to the children, it is well to keep the following facts in mind:

1. Exposure to the sun must be gradual or else the child may receive a sunburn.

2. At first give the baby direct sunlight for about ten minutes. Increase this bath from three to five minutes daily until he receives exposure one hour in the morning and one hour in the afternoon. This will vary depending on how the skin reacts to the exposure.

3. Be sure that the exposure is carried on in some spot sheltered from the wind.

4. Sun baths may be given on enclosed porches or in the house, provided the sun can shine on the child unobstructed by glass.

5. Certain special kinds of glass have been devised which permit the passage of the majority of the beneficial rays of the sun. Such glass may be used if desired.

The above directions also apply to adults, who should observe similar precautions and avoid prolonged or sudden exposure to sunlight, as injurious or even dangerous sunburn may result if the sunburn is extensive.

In case sunburn does occur, the following has been found to be useful:

Make a lotion as follows: Take one-half a pint of hot water and stir into it a level tablespoonful of boric-acid powder; then add 20 drops of carbolic acid, and shake well. The solution should be dabbed on the inflamed skin with a small piece of cotton or sprayed on with an atomizer. It should not be rubbed into the skin. It can be applied every half hour, if necessary. If no medicine is available, cold compresses will give relief to badly burned areas.

# THE NEW HAMPSHIRE MEDICAL SOCIETY

## THE GENERAL PRACTITIONER OF MEDICINE AND HIS RELATION TO SURGERY*

BY JOSEPH J. COBB, M.D.†

SINCE 1881 I have been engaged in the general practice of medicine and surgery. My work has been chiefly that of the family physician and the industrial surgeon. Living and working in a small country town for ten years, and later in a small city, it has been impossible for me to specialize in any one branch of the medical art.

During these forty-seven years there have been wonderful changes and advancements in every department of medical practice. In the old days the doctor was properly labelled "physician and surgeon". There were only a few specialists in surgery and none except in the large cities. So many new discoveries have been made in our profession, so many refinements in practice, that it has become necessary to divide and sub-divide the doctor's work. We now have specialists in many departments of practice. In our small cities, villages and towns, however, the doctor must still be both physician and surgeon.

The questions of just how much and to what extent the general practitioner should engage in what we may call major surgery is a subject which I think worthy to be seriously considered in a paper at this time. In our large cities, where there are well equipped hospitals and many trained surgeons, who limit their work to surgery, there seems to be only one answer to this question. But in places away from these medical centers, a different solution to the question must be found.

The expert surgeon specialist is not at hand. Emergency cases are often seen in which the delay in obtaining one may cause the loss of life that could have been saved by an immediate operation.

It therefore follows that in such localities some of the general practitioners must be qualified and prepared to operate upon all cases of emergency needing surgery. It is true, of course, that the automobile and good roads in both summer and winter have changed this situation to some extent; nevertheless, the general statement can be accepted that the general practitioner to be efficient and successful in the more remote locations mentioned must be prepared to treat all emergencies in surgery.

For the more serious operations which are not immediately urgent the surgeon specialist can be called, or such patients can be taken to a hospital where the necessary surgical skill can be obtained. A gangrenous appendix is an emergency case. Also a ruptured ectopic gestation, obstruction of the bowels in which vomiting or a beginning peritonitis is in evidence, is a most urgent emergency. Such a case cannot wait if life is to be saved.

In my own experience I can recall several cases of intestinal obstruction which I remember with feelings of regret in two instances, and with feelings of satisfaction in several others.

The first three cases which I saw many years ago, died. The first one, seen about forty years ago, refused operation. The next two were operated upon by competent surgeons, after a too long delay. During the last fifteen years I have found and immediately operated upon five cases with one death and four perfect recoveries. It may be of some interest to briefly record these cases.

### CASE I

The first—was a baby boy about one year old. When seen by me he seemed to be very ill. He had been sick 2 or 3 days, apparently suffering some colicy pain, had been given physic by the mother, but bowels had not moved for 2 days. He had commenced to vomit. Examination showed distention of abdomen and a large left inguinal hernia which the mother had just discovered that morning and which had descended into the scrotum. It was very hard. Operation was made at our hospital as soon as possible by opening the inguinal canal in the usual way. On incising the sac, a portion of the large intestine was found imbedded in the scrotum and was very dark in color. After reduction normal color soon returned, but at this moment the baby stopped breathing and seemed near death from shock. He soon revived and operation for hernia was completed. He made a rapid recovery with the hernia cured.

### CASES II AND III

The second and third cases occurred in the same patient, a woman about 60 years old. The two obstructions were caused by the impaction of large gallstones which completely blocked the lumen of the gut. The first stone was found about 16 inches above the cecum and the second one six months later was found 12 inches nearer the stomach than the first, the scar of first operation being plainly seen. It was a simple matter to incise the gut, roll out the stone and close the incision. This patient made a prompt recovery from the second operation as she did from the first. She died a year or more later from heart disease. The interesting feature about this patient was the fact that she gave no history of any previous attacks of hepatic colic.

### CASE IV

The fourth patient was a girl about 12 years old. She had been very ill for three days when first seen by me. She was an only child. The symptoms of pain, distention of abdomen, with rigidity and vomiting, together with the history given indicated a gangrenous appendix, which was my diagnosis. The operation done three hours later at the hospital dis-

*Read at the Annual Meeting in Manchester, May, 1928.

†For record and address of author see "This Week's Issue," page 488.

closed a normal appendix but a tumor mass was located in the middle of the abdomen near the umbilicus. This mass when drawn out through an enlarged incision proved to be an intussusception of the ileum about 16 inches above the cecum. The gut was gangrenous and reduction was impossible. I was obliged to cut away the whole tumor mass. Then I closed both ends of the gut and made a lateral anastomosis. This operation was entirely new to me. It took a long time, about two hours. The patient went back to bed in good condition, making a rapid and complete recovery. I will add that for safety, I placed a small cigarette drain which remained a few days, but there was only a little serum drainage and no sign of infection.

### Case V

The fifth and last case to record was a chronic obstruction partial at first but later becoming complete, caused by multiple abdominal herniae. This patient was a woman about 50 years old. She had previously suffered similar attacks, getting relief by medical treatment. At this time no relief was obtained. She rapidly became toxic without vomiting. As a last hope to save life an enterostomy was done to secure fecal drainage. She died in a few hours from toxaemia.

These recorded cases are mentioned to illustrate a class of emergencies met by the general practitioner and which must be operated upon without any delay. Two of these four cases had progressed so far when seen by me that they had begun to vomit a dark colored liquid having a fecal odor. At the time these cases occurred there were no surgeon specialists nearer than Portland or Hanover.

In addition to such emergency cases the general practitioner must be the surgeon for a large variety of injuries incident to industrial occupations and to the country life. The difficulty lies in making a proper selection of the class of surgical work which he should do himself, and that which he should refer to the specialist. As a general statement I will say that he should do all the work that he knows he can do well with the assistance of other local doctors near at hand. The best interests of the patients must determine this in all instances.

It is very difficult to state or even indicate the kinds of surgical work that should be attempted by the general practitioner, other than emergency and industrial surgery. There is certainly a limit. Drainage of the pleural cavity for empyema, operation upon a fractured patella, amputations for crushed limbs, and operation for the cure of inguinal hernia, and the like, are not difficult to perform and are, I think, operations that may be done by the general practitioners. Appendectomy is often done by them. Drainage of the gall bladder, cystectomy and also hysterectomy are occasionally done. These last three are surely getting near or a little over the border line, and should be performed by a good surgeon. When the general practitioner gets to doing surgery it seems to be extremely hard for him to realize just where he should stop. In my opinion operations upon the stomach, either partial excision or gastroenterostomy, operations upon the kidney or ureter, goiter operations, orthopedic work, like bone splinting for un-united fractures, or operations upon the bladder or prostate, should be reserved for the expert surgeon who has had much experience in such surgery. Cystostomy, as the first state of a prostatectomy can, of course, be done by the general practitioner surgeon, and also operation for a ruptured ectopic gestation which is an emergency. Gunshot wounds may be classed as emergencies. It is understood that all operations herein mentioned as suitable for the general practitioner and the surgeon specialist are to be considered only as types of surgical work, appropriate for each, since absolute rules for individual surgeons cannot be stated.

There are many general practitioners who do not choose to do any major surgery. They may not be favorably located for this work, or they may not be fitted temperamentally for it. They are obliged to call in a surgeon to operate for them. These are situations in which there should be the best possible co-öperation between the family physician and the surgeon. When the family physician by his general knowledge and diagnostic skill has recognized the fact that he has an acute dangerous condition to deal with, that a surgeon is needed at once, and calls one who does an operation that saves a life, it should be understood by all parties concerned, and generously acknowledged by the surgeon, that the physician has contributed as much toward the saving of such a life as has the surgeon. It is perfectly easy for the surgeon to leave that impression with the family if he wishes to do so. Such a generous act on his part illustrates one phase of what I mean by a proper co-öperation between the surgeon and the physician. When the bill for such a service is paid, the family physician should receive his just portion of the fees commensurate with the value of his services rendered.

Sometimes the attending physician will be called to cases that may or may not prove to be surgical. He will be in doubt, then he should call a surgeon as a consultant and the surgeon must assume the responsibility of diagnosis and treatment.

The general practice of medicine in places remote from hospitals or medical centers is today a most difficult vocation. Many towns in our state are without a local physician, as has been shown by recent surveys made by committees from this society. These people need medical service. There are well trained young physicians in our cities waiting for practice, who need the remuneration for such service.

It seems to me that in some way, perhaps by a better co-öperation between these people and a local physician, and also by a correct, ethical co-öperation between him and his consultants, that some of these young physicians could be induced to locate in such towns and engage in the general practice of medicine.

In conclusion I want to emphasize what I have

already stated, namely, that in the large medical centers the general practitioner is not required, or expected, to be a surgeon. Only minor surgery is done by him, all major surgical cases are taken to the hospital. But in small cities and towns, to be efficient and successful, the general practitioner must be a surgeon to the extent that he can operate upon all cases of emergency, and properly treat all accidents incident to the industrial occupations and to the country life.

### Discussion

Dr. David W. Parker, Manchester: The keynote of Dr. Cobb's paper is, I believe, contained in the following quotation: "As a general statement, I will say that he (the general practitioner) should do all the work he knows he can do well with the assistance of other local doctors near at hand. The best interests of the patients must determine this in all instances." This means, however, that the doctor who accepts the responsibility of major surgery must, in justice to his patient, be equipped to meet any emergency which may arise during an operation, or to deal with any unexpected pathology. No one realizes as well as the man who is doing abdominal surgery constantly, how frequently the supposedly simple operation may develop into one which will require the highest degree of skill and experience.

I think the important factor in this question is not whether or not the so-called general practitioner should do surgery, but whether this particular practitioner has had a sufficient preliminary surgical education, training, and experience to enable him to have an accurate knowledge of living pathology and to develop surgical judgment as well as technique.

The fact that a man does general practice does not necessarily mean that he is not competent to do surgery. There are many doctors of this class in our state who are competent and are doing good surgery. I do believe, however, that the doctor, without any special surgical training, who occasionally goes into an abdomen incurs a very heavy responsibility. His mortality rate may not be particularly high. Clean hands, rubber gloves, and well recognized modern aseptic technique take care of this. It is the morbidity rate, the unrelieved patient, the incomplete operation, or the unnecessary operation due to mistakes in surgical judgment or ignorance of surgical pathology that brings discredit on surgery.

Dr. Cobb dwells on surgical emergencies. I agree with him absolutely that life will occasionally be saved by immediate intervention by the man on the ground; this applies particularly to traumatisms. I do feel, however, that the term "surgical emergency" is very elastic and that its correct interpretation depends on the weighing of many problems which require a considerable knowledge of surgical diagnosis, and of the relative dangers of immediate operation, or of operation delayed until possible recovery from an initial shock in a given condition takes place; a knowledge which can be gained only from experience and a familiarity with the literature on the subject.

With the ever increasing wealth of literature on every medical subject so easily available to even the remotest practitioner, the percentage of desperate emergencies is progressively decreasing and will continue to decrease with the earlier recognition of a probable surgical emergency before the real imperative emergency occurs. Intestinal obstruction manifests itself by a train of symptoms which are strongly suggestive long before fecal vomiting occurs. It is my firm conviction that more lives will be saved by going into a suspected surgical abdomen than by deferring operation until an unquestionable diagnosis can be made.

Ectopic pregnancy always has a suggestive history and these women seldom die from their first hemorrhage or even several. Polak states that from a very large series over 90% were of the tubal abortion type with progressive hemorrhages. Strangulated gut does not go gangrenous for a period of hours. An acute appendix should be removed on diagnosis.

I appreciate that not infrequently the family physician is confronted with a patient who through ignorance or neglect has delayed seeking medical advice until a desperate condition exists. Here, of necessity, the doctor must use measures of relief at his immediate command. Fortunately this class of cases is decreasing and will continue to decrease through direct education of the public.

I feel that New Hampshire is fortunate in having at the present time a sufficient number of surgeons and general practitioner surgeons distributed all over the state so that the people will not be obliged to suffer from lack of available surgical skill, or that the man who feels himself incompetent will be obliged to rely on his own efforts.

Dr. Homer H. Marks, Berlin: Somehow or other after reading Dr. Cobb's paper the other day it has been impossible for me to concentrate on the things and work out any discussion further than what he has included. In other words, it seems to me it is a splendid and unusual paper. His record is proof positive that the general practitioner of good judgment aided by competent assistants can do major surgery.

In a State like New Hampsire with a sparse and widely scattered population it isn't possible for more than a comparatively few men to devote their time to surgery, and with the gradual development and organization of well equipped hospitals in all the larger communities it was inevitable and is inevitable that more and more men, general practitioners so-called, should devote an increasingly longer time to major surgery; and this in my opinion is as it should be.

Today it is possible for the general practitioner by frequent excursions to the metropolitan centers and by other means at his disposal to equip himself to do this class of work. And my observation is that the surgery being done by the general practitioner throughout the State compares very favorably with the surgery that is done anywhere. I think that the general practitioners are not lacking so much in surgical skill as they have been careless or hasty in making their diagnoses. If the general practitioner of medicine is to do surgery, he must devote every possible means at his disposal to make the correct diagnosis in his cases, and in no other way can he become competent to perform major surgery that is creditable either to his patient or to himself. To me that is the key-note of the whole situation.

In our City of about 17,000 with quite an outlying district a good deal of surgery is being done, a good deal of needless surgery is being done; and it is done because there isn't a thorough diagnosis. To my mind a pathologist, a man who can do blood work, a man who can use the microscope successfully, is an absolute essential to a hospital organization if good surgery is to be attempted. And that is a thing we have neglected. Dr. Clow told me that over in his little hospital in Wolfeboro they just put in a woman there who has been doing splendid work and is able to help them in their diagnoses. We are constantly coming across surgical mishaps and surgical tragedies that could have been avoided if correct diagnoses had been made.

The other important thing in discussions of this kind is just how far the general practitioner should go, and here, as Dr. Parker says, the question has been so nicely answered that nothing further could be said. If we could employ the golden rule as laid down by Dr. Cobb, I am sure the surgery as done in the State of New Hampshire would be a credit to the medical profession.

The only addition I could make to those mentioned by Dr. Cobb as being border-line cases is this—it is impossible for one man to say how far the other should go. Reconstruction of joints, plastic surgery of all types, and surgery that is seldom encountered should be let alone in any case. If a correct diagnosis can be made and if it isn't an emergency, it would better be referred to someone who is competent to do it.

Dr. Louis W. Flanders, Dover: This is a subject which is very near to my heart. You men know, and there are no men who know better than you, how much we need doctors up here in Vermont and New Hampshire. When we ask the new graduates to come up and help us, this is what they reply: "If you will pay us city prices, if you will furnish a hospital, a pathologist and a corps of nurses, we will come," just as though they had no responsibility whatever in the matter, and that it was entirely up to country people to get doctors how and where they can. Now I don't believe that for a minute. Every man is placed here to do something; he is not a free agent. He is here to do his part of the job to be done in this world, and I refuse to see it in any other light. Furthermore, it would help every recent graduate to come up here and put in a year or two of country practice because he will see more kinds of cases than he will see in the city in the same time.

I am not decrying the advances science has made, but on the other hand, I sometimes think we are ultra-scientific. I disagree in a measure with my friend Dr. Parker. Sometimes if we waited for scientific methods the patient would be dead. Sometimes it becomes a question of whether we shall let the patient die with or without a doctor. (Laughter.)

Two or three years ago a physician testified in this room that he was once called to an emergency and found a man choking to death over a piece of beafsteak. He had no instruments with him to deal with a case of that kind, but he cut off eighteen inches of his horsewhip and with that pushed the meat on into the man's stomach. Not scientific, but he saved his patient.

The demand for scientific treatment sometimes leads us into unexpected paths. A year or two ago, while on a vacation in Vermont, I overheard the following conversation between two farmers.

"I hear Bill's wife is dead."

"Yep."

"What did she die of?"

"Oh, some kind of a tumor I b'lieve."

"Couldn't she ha' ben operated on?"

"Yes I s'pose so, but they would haf to carry her forty miles tew a hospital an' Bill would have hed to sold a couple of cows to pay fer it an' so they jest didn't do it."

When I was associated years ago with Dr. Woodward of Brandon, Vermont, we would have scrubbed up the kitchen table and given that woman the chance to which she was entitled. So I say the country doctor, and the country surgeon sometimes, has to do the best he can. It is nonsense to say that he must not touch this that and the other. He is confronted with an emergency, he is forty miles from a hospital, death is imminent and his patient is entitled to a chance.

Again let me emphasize the fact that I rejoice in the progress we have made. Our methods are improving and our nomenclature is appalling. When my friend, the pathologist, invites me in to view the lovely eosinophile, I am filled with joy because I, too, am a lover of the rosy dawn; but when I sit down to the *Journal of the American Medical Association,* I am careful to have a Latin, a Greek and a medical dictionary at my elbow. Sometimes I feel like asking Doctor Fishbein to establish a "Children's Corner" in the *Journal,* where the country doctor can have his little playthings and play without disturbing his ultra-scientific neighbors. It would almost seem as though we were entitled to it when we

reflect that two-thirds of the United States is rural and only one-third urban.

No, we cannot legislate people into living in the country. But it is just possible that we may be able to persuade certain young men that it will be for their advantage to come and live with us for two or three years. It sometimes happens that to youth comes the realization of that which usually dawns upon us in age, namely: that it is not wealth or position or "the applause of listening senates" which really counts in this world.

DR. THOMAS W. LUCE, Portsmouth: I think that this is rather a stimulating paper and I have got to say something. I think Dr. Richard Cabot has been quoted as saying that any man who classifies himself as "physician and surgeon" is never very much of either. Dr. Cobb admits that he belongs in this classification and then comes down here and reports a series of intestinal obstruction operations with a mortality of 20 per cent. He refutes Dr. Cabot's statement because that is twice as good as the generally accepted mortality of 40 per cent. in these operations when done by the best surgeons.

Now if Dr. Cobb is expected to rise to the occasion when a gastric ulcer perforates or when he has a ruptured ectopic pregnancy or an intestinal obstruction to deal with, it seems to me we ought to forgive him if he does an ordinary routine thing like removing a benign tumor from a female pelvis occasionally to keep in practice.

Dr. Cobb used the term "surgeon specialist." That is a new phrase. I don't know whether he wants to convey the idea I have of that term. My idea is that while we have a good many surgeons who do most all operations well, we have a few who from their adaptability and training and technique do one operation and operate in a limited field exceedingly well and it seems to me that Dr. Cobb's advice could be as equally well applied to the general surgeon as to the general practitioner. I think the general surgeon is under an obligation not to do the operations Dr. Chevalier Jackson is doing through the bronchoscope or to do the work that Dr. Harvey Cushing is doing. I think that a man who is trying to perfect himself along special surgical lines should have the support of the general surgeon as much as that of the general practitioner.

Most of you know that Dr. Cobb made a postcard survey of the State on these things, but for some reason he didn't see fit to include that in his paper, and I would be interested to hear the results of that survey.

DR. E. O. CROSSMAN, Manchester: This seems to be a sort of family affair. Inasmuch as my responsibility seems to be great I have been trying to persuade doctors to be good internists before they become specialists and not to devote themselves to one thing exclusively. Somebody has said: "A specialist is a man who knows more and more about less and less." I would not consider the matters that Dr. Cobb speaks of as necessary emergencies, or as necessarily cases that should be cared for by a man who is doing general work, but I do think that a man who is going to specialize in a general line should be able to call himself a physician and should be able to meet all ordinary emergencies. Because he is a specialist on heart diseases he should not say with pride that he knows nothing about lung diseases, or about abdominal diseases, or just pick out one little part of the anatomy as his field of work.

It seems important that if we are going to be physicians, we must qualify as physicians and keep abreast of the times whether we are specialists in neuropsychiatry or what not, so that we might meet the ordinary emergencies that a general practitioner ought to be able to handle.

I do think that a surgeon cannot have too much training, if he is going into the difficult problems that are being discussed here tonight. I always have had a good opinion of the men of New Hampshire whose medical attitude I consider sound; and I am glad our physicians have not gone "specialty crazy." In my opinion it is well to discuss these matters in order that we may avoid the little narrow, contracted propositions, and treat the big problems of a human being which we must all be ready to treat when the emergency develops.

DR. H. O. SMITH, Hudson: I listened with much interest to the thoughtful paper read by Dr. Cobb. For many years he and I have been of the same mind, particularly in our admiration of Charles E. Hughes and in our views on the League of Nations; but I absolutely disagree with his statement in the concluding paragraph that in small cities, to be efficient and successful, the general practitioner must be a surgeon to the extent that he can operate upon all emergency cases and properly treat all accidents incident to industrial occupations.

Dr. Cobb emphatically states that in the large medical centers the general practitioner is not required or expected to be a surgeon. I believe this to be equally true of the general practitioner in the smaller cities and the towns adjacent to such cities. He should know when surgery is necessary but he should not attempt to perform major operations. If in the larger centers the better qualified men should do the surgery, so too in the smaller cities should not this rule hold? I am sure that too many of the men in our smaller cities are eager to do major surgical work. But once more I am in thorough accord with Dr. Cobb when he says that the best interests of the patients must determine, in all instances, who shall operate.

DR. JOHN F. HOLMES, Manchester: I had an interesting talk with Dr. Cobb last evening, and we discussed this matter which he is presenting. First of all I want to commend him for the summary of his paper when he said "the general

practitioner should do what he feels competent to do." I think that is the whole argument and should be the guiding influence in the practice of any physician. If we all do what we feel we are competent to do, whether as general practitioners, general surgeons, or as a specialist along any particular line, certainly no just criticism can come to us. We will all make our mistakes, but we certainly will in the large majority of instances be on the right side. And in the discussion Dr. Cobb said all that need be said in regard to the practice of surgery by the general practitioner. It isn't whether he is practicing general medicine; it is whether he is competent to do the work he proposes to do. But in the instance of Dr. Cobb, the study of his paper and his general reputation lead me to believe he is a general surgeon practicing general medicine. If he is competent to do the work, there should be no just criticism.

The question arises as to what makes a specialist. Dr. Cobb and I had an interesting discussion of that last evening, and we reminded ourselves that even in this day the specialist is even urged and influenced to prescribe for a cold; so that all lines of special work are sometimes broken under emergencies; and our own conscience determines the work we shall do.

There is no question about the great advantage to the medical profession and the world of the highly trained skilled specialist; it is through such that the advance in medicine goes on. And there is no question about the great good that is being done by the general practitioner; he should be highly commended for the modesty that is characteristic of that branch of medicine.

I compliment Dr. Cobb for his most excellent paper and I thank you for the privilege of discussing it.

Dr. W. R. Sanders, Derry: All we have heard is surgery. We have been fed up on surgery. Nothing about the general practitioner. Now surgery is the easiest part of the physician's life. He knows what he is going to cut through, just like a carpenter. Occasionally things go wrong, but he gets the praise. To ask somebody out in the country to go into the abdomen is too much to expect of us, but a doctor who goes out into the country and finds a case of pneumonia and cures it is doing more for the community than the man who operates on a case of appendicitis; and yet the doctor who does the appendicitis gets all the praise. A man cuts off a finger, and the patient shows what a fine job was done; another man saves the finger, but nobody gives him any praise. Another man is called upon to see a case with an acute belly, and we have no time to consider and give them a chance; but we have to know right at the moment. It requires a great deal of nerve work and brain work to cure typhoid fever and pneumonia. I had a case of a little baby who had an abdomen all puffed out and I punctured below the navel, and the pus squirted out, and the child got well. I had a little girl climbing up a birch tree and she fell down and I didn't know what happened. She must have ruptured her gallbladder and died in a few days, but I never got any credit for that, of course.

Dr. Joseph J. Cobb, Berlin (closing): I will answer Dr. Luce's question first. He suggested that I had got some information. I did send out 50 questionnaires to the doctors I knew throughout the State, asking several questions, and from the study of the answers I found out that nearly all of the surgery that is being done in New Hampshire is done by doctors doing general practise. There is a very small part of the surgery done by surgeons who limit their practise to surgery. I found very few surgeons limiting their practise to surgery north of Concord. All the rest of the surgery done north of Concord is done by general practitioners.

I do not advocate that every general practitioner should do surgery. No man should do that unless he is trained in asepsis and surgical technique. I do believe a man can qualify himself by going to Boston or New York for post graduate study and observing the best workers. By doing that he can gradually work his minor surgery into major surgery and practise general medicine at the same time. I do not think any man should attempt to enter the abdomen until he knows the technique of abdominal operations and he should know the technique of asepsis; and if a man is trained in asepsis and surgical technique, he can do creditable surgery.

I do not advise all practitioners to do surgery. I said in my paper that many practitioners are not fitted by temperament and by training to do surgery and they are a credit to the profession, but a general practitioner who is a good diagnostician and can recognize the fact that he needs a surgeon, has sometimes done as much as the surgeon in saving the life of the patient and he should have for such service a substantial fee.

I learned that there were three or at least two surgeons limiting their work to surgery north of Concord, and I didn't find any south of Manchester. However there may be. I received answers from surgeons south of Manchester most all of whose work is surgery, but they say they do general work besides surgery.

My point is that no doctor should do surgery until he is qualified to do surgery and do it right. But when a doctor understands the technique of aseptic surgery and feels he is qualified to do surgery and knows he can meet these cases of emergency and can do the emergency surgery, I think he is justified in doing it, although he is engaged in general practise.

Every surgeon in the northern part of the State is doing general practise—no exception. Every surgeon except one north of Hanover—does general practise and obstetrics.

Dr. ——: Some of the men might think you were an advocate of fee splitting.

DR. COBB: I said that the general practitioner who is able to diagnose and does diagnose a critical case is entitled to a substantial fee for his diagnosis. I do not believe in fee splitting.

But I feel that the country doctor should have a good fee too.

THE PRESIDENT: We would like to hear from Dr. Chapman of Springfield, Vermont, who is a delegate from the Vermont Medical Society.

DR. A. B. CHAPMAN, Springfield, Vt.: I am grateful for the opportunity to meet the members of the New Hampshire Medical Society and to present to them the greetings from the Vermont State Medical Society.

## SOCIALIZED MEDICINE*

(ABSTRACT)

BY MORRIS FISHBEIN, M.D., CHICAGO†

THE modern science of medicine began with the discovery of bacteria by Pasteur about fifty years ago. Long before that time, however, Hippocrates had taught the art of observation and had called attention to the importance of the individual relationship of the physician to his patient. The most ancient of physicians recognized the fact that some persons could inspire the patient with a desire to recover and could apparently aid that peculiar power lying within the body known as the *vis medicatrix naturae*, the power within living tissue that urges it to repair.

As time has passed, facts and methods have accumulated. The old-time physician who graduated from a two years' course of lectures, the same lectures being repeated during the six months of each, practiced a sort of "hit-or-miss" method of healing. He took the history of the patient, looked at the tongue, thumped the chest, and listened to such murmurs as were easily apparent. On the basis of the general knowledge of the course of disease, he made a diagnosis. The practice of modern medicine is a far more complicated matter. It involves not only all of the things that have been mentioned, but also the use of much intricate apparatus, laboratory service, the X-ray; indeed, a study of all the secretions and excretions of the human body. As a result, the cost of medical care has increased greatly and is giving concern to sociologists and economists. For some time the statement has been made that only two groups of persons can afford to be ill, the wealthy and the very poor. The former are able to pay for what they get and the latter get a rather good type of service without charge.

The group that gives the greatest concern to students of the situation is the middle class. This group has been the victim of exploitation since the earliest times. It exists in one-room kitchenettes in the cities and must perforce go to the hospital in times of sickness. In the country and in the villages it is far removed from the available hospitals and pays mileage charges in addition to medical fees for medical attention. Because of its transient character it has fallen out of touch with the old-time family physician. This group, therefore, usually provides the primary source of revenue for medical quacks of every sort. The member of the middle class is likely to attempt to save the cost of a visit to a physician by purchasing a patent medicine widely advertised in the press or by asking the corner druggist to prescribe. Middle-class workers are likely to join fraternal orders which maintain incompetent lodge doctors. Sometimes they work in large industrial plants or factories, where a certain sum is taken from their wages each week to pay for treatment in the factory hospital or for a visit from the factory doctor in time of sickness. As a result numerous leaders in the public-health field have urged the establishment of compulsory health insurance or other health schemes to provide funds for the care of the middle class.

Some economists have insisted on a State system of medicine which will provide health care in much the same manner as the State cares for education. Gerald Morgan, for instance, has insisted that there must be a radical change which will emancipate health in some way from the fetters of the existing acquisitive economic system and provide free periodic physical examination regardless of known ailments and some financial provision for the families of those needing help in time of illness.

Professor C.-E. A. Winslow, when president of the American Public Health Association, said that the purely individualistic practice of medicine, as it has existed in the past, must be increasingly supplemented by a form or forms of organized medicine which will offer to the individual modern scientific medical care including laboratory and specialized consultation service on an economic basis which will facilitate its application to the prevention of incipient disease—probably on some basis which involves payment of the physician through a common fund for the supervision of the health of an individual rather than for the treatment of a specific ailment.

The health-insurance scheme developed through the sickness societies of Germany has been the subject of debate ever since its establishment. The panel system in Great Britain continues to be the subject of discussion by both the medical profession and the public. That system grew out of what is known as contract practice, a system whereby families paid a regular fee each week or month to the physician for

*Read at the Annual Meeting in Manchester, May, 1928.

†For record and address of author see "This Week's Issue," page 488.

all of their care. The same system has been employed by trade unions and by lodges. Unfortunately contract practice resulted in scamped work, because the physician was invariably underpaid. Persons well able to pay took advantage of the opportunity to get service at minimum rates. In times of extraordinary illness the patient had to pay extra for special service or resort to charity. The medical profession was demoralized through political maneuvering for the most remunerative contracts. In 1911, under Mr. Lloyd George, the National Insurance Act, which gave rise to the panel system, was passed. Since that time it has been modified repeatedly. Any doctor can get on the list of those working under the act and there are in England, Scotland, and Wales some 35,000 so registered. Of these fewer than 15,000 are actually doing national insurance work. About 1,000 physicians, constituting an active minority, refuse to have anything to do with the whole scheme. The number of persons insured under the act is approximately 15,000,000, so that the average number of insured persons in the care of one doctor is about 1,000.

When accepting appointment under the insurance scheme the doctor agrees to give such service "as can properly be undertaken by general practitioners of ordinary competence and skill." Thus those registered are not provided with the best that medical science can provide. The persons treated are those who do not earn above a certain minimum sum per week. The patient presumably has a free choice of physician, although this is governed by accessibility and the willingness of the doctor to take more patients on his panel. Some doctors have 400 on their panels, others 3,000. There are material benefits for prospective mothers, and there are minimum fees for doctors: the latter have never been considered adequate; in many cases the physician must supply the drugs prescribed as a part of the fee.

The American medical profession has looked with increasing concern at attempts to establish similar State systems in this country. For instance, the Committee on Public Policy of Ohio State Medical Association, at its last annual meeting, presented a resolution which was adopted by that State organization, objecting to every possible encroachment of the State on private medical practice. They objected to the extension of free clinics, to the growth of health-insurance ideas, to the widespread propaganda for nationalization of property and socialization of personal service, to the increase in health charity for those able to pay, to personal health service without charge in educational institutions, and to every other tendency of governmental agencies and departments, to interfere with the relationship between patients and their individual physicians.

The mechanization of medicine is an evil recognized by every physician as a menace to sound medical practice. Come what may, the intimate personal relationship of physician and patient is essential to complete relief of the patient's ills. Even the periodical physical examination is unsatisfactory when applied on an impersonal basis. True, it may detect the scientific evidence of incipient physical disease, but it does not get at the personality of the patient in the manner that formerly resulted from the relationship between the general practitioner and his patient. Even the best social-service technique may fail to find the human being that the old-time physician used to know in each of his patients. A single point in the life history of the ailing individual may explain the major part of his symptoms and his distress. Not infrequently that point is carefully concealed from everyone except the personal physician in whom the patient has the same confidence that members of some churches have in their priests.

The evils of socialized practice, indeed of any impersonal method of medical practice, are generally recognized. They involve inadequate compensation for physicians: the average salaries of doctors in State or commercial organizations rendering such service are between $3,000 to $4,000 a year, notwithstanding the fact that an adequate medical education may cost the doctor approximately $20,000 to $25,000. The standards of medical practice are lowered because the tendency of the contract doctor is to see as many patients as possible. Patients are moved along without adequate attention. In some parts of the country doctors engaged in contract practice attempt to see eighty or ninety patients each day. The physician falls into the deadly routine of contract work, initiative is lost, and advancement is dependent on the individual's ability to pull wires.

Only too often industrial medicine has become an instrument for fighting compensation claims. The salaried medical services of department stores and of factories are so impersonal that many employees prefer, even though assessed for the provision of medical care, to seek out a personal physician in time of stress. Why should not a democracy attempt to insure the worker a salary or wage adequate to provide for medical treatment and ask the medical profession to organize itself for the provision of such treatment, rather than pauperize the middle class by degrading the medical profession?

More and more the advances in modern medicine reveal the essential differences between individuals that make routine methods of diagnosis and treatment impossible. More and more physicians are beginning to recognize the influence of the mind in disease and in the treatment of disease, a factor invariably lost in mechanized practice. State medicine might provide a standardized diagnosis and treatment for a standardized citizen; but it means death of individualism, of humanitaranism, and of scientific practice. Until we become a nation of robots with interlocking, replaceable, and standardized parts, there will be little need for completely standardized doctors.

# FRAUDS AND QUACKERY IN MEDICINE*

(ABSTRACT)

BY MORRIS FISHBEIN, M.D.†

DR. FISHBEIN said he would speak of faith healing in its scientific aspects only. The difference between scientific medicine and faith healing he described by the parallel case of the black cat that is not in the cellar: the philosopher looks for it, but the theologian finds it.

There are three things in which every man is naturally credulous, he said: money, matrimony and medicine. Of these credulities, that in regard to medicine is the only one of which the results may be permanently harmful.

Charlatanry, he pointed out, is not peculiar to medicine but has its exponents in the law and the ministry as well. (He remarked here that certain supposed ministers were said to obtain their results by perspiration rather than by inspiration.) He described the charlatan as a man of great personal appeal who uses his personality primarily in getting results, who realizes that he does not possess the powers that he claims. Charlatanism is often connected with a "divine call."

The medicine of today, he said, rose out of the faith healing of the Jews and the Aramaic peoples and the Greeks. Hippocrates observed the tendency of sick tissues to get well. The scientific man, realizing this, says only that he did what he could and the patient got well. The charlatan says, "I cured the patient."

After the time of the great Greeks came the dark ages of medicine; then the great anatomists with their recognition of the fact that one had to know the human body.

There was no great practitioner of the art of healing by suggestion until the German, Friedrich Anton Mesmer. Then came John Graham who called himself "Servant of the Lord, O. W. L.," the initials standing for "Oh, Wonderful Love." Mrs. Mapp might be said to have been the "Bonesetter Reese" of 1784. She held sway for two years. Next appeared Bishop Berkeley and his tar water.

About this time Benjamin Franklin's discovery of electricity had its influence on medical quackery. The first great American quack was Elisha Perkins who invented the so-called metallic tractors. They were electrodes which were to be drawn downward over the body, never upward. For these he charged five dollars a set. They were sold by testimonials, the great selling agent for all forms of fraudulent medical devices. (Testimonials can be purchased, particularly for cosmetic preparations, for prices varying directly with the prestige of the testifier.)

At the time of Mesmer (c. 1800) Paris was the great center of faith healing and it was there that he built his Temple of Animal Magnetism, as mesmerism was called.

Disciples were soon found in the United States. At Belfast, Maine, Phineas Parker Quimby started the practice of mental healing.

In 1822 Mary Baker was born. She was an imaginative, spoiled child. Soon after her first marriage she developed a sort of illusion of childhood and insisted on being rocked to sleep. The first husband died in a few years. Her second husband she divorced while he was in a prison camp during the Civil War. About this time she received what she thought was a spinal injury, in falling. She heard of the faith healing of Quimby and went to him to be treated. He cured her in two treatments.

Dr. Fishbein illustrated the possibility of such a cure by the case of a girl in Hamilton, Ontario, who was supposedly suffering from paralysis, and whom Dr. Sippy, of Chicago, was called to see. He determined on examination that there was no actual paralysis and in a few minutes was able to walk out of the sickroom with the patient accompanying him. It was merely a scientific diagnosis of hysterical paralysis.

Quimby wrote a book on mind healing, of which the manuscript is still preserved and from which Mary Baker Eddy's book, "Science and Health with a Key to the Scriptures," was obviously derived. It contains all of Quimby's points. After her experience with Quimby, Mary Baker went to Boston and set herself up as a mind healer. In a few years she married her third husband and when he died, not long after, she asserted that the cause of his death was "malicious animal magnetism." Postmortem examination, however, revealed the presence of endocarditis and myocarditis. She then associated with herself a sort of general manager who lasted ten years. Meanwhile, she had become extremely wealthy through the promotion of Christian Science and when she died she left a trust fund for the propagation of her creed.

Dr. Fishbein pointed out that there are a great many things about Christian Science that need not be taken especially seriously; but that when an adult permits a child, who is not his property but his sacred trust, to strangle of diphtheria without bringing the aid which would save its life, that should be taken seriously.

It is unfortunately quite possible in this country to create permanent trusts for antisocial purposes.

In this country today there are thirty-seven systems of mind healing embracing about 10,000,000 people. The names of most of these

*Read at the Annual Meeting in Manchester, May, 1928.

†For record and address of author see "This Week's Issue," page 488.

systems are associated in some manner with the word "science."

The beginning of osteopathy occurred when Dr. Andrew Still conceived his idea of the importance of vertebrae to the human welfare. He traveled about preaching his creed in many towns but was not favorably received until he found what he called "the Athens of America," Kirksville, Missouri, in 1872.

It was only in 1879 that Pasteur offered proof that specific germs were associated with different diseases. From this date all modern medical science advanced so rapidly that it became difficult to qualify for the practice of medicine, and charlatans found it necessary to "get in through the back door." It was under these circumstances that osteopathy got its start. The osteopath of today now contends that many diseases of man arise from pressure of the bones upon the spinal nerves but also that he restores all tissues to their harmonious relationships. The osteopathic course has increased from its rude beginnings until now it requires a high school background and about four years of study.

The laws of the various states differ with respect to the rights of reputable physicians and healers of various sorts. In California the osteopath is placed on an equal footing with physicians graduated from accepted medical colleges.

Dr. Fishbein said that if the osteopath "comes in through the back door," then the chiropractor "comes in through the basement." While the man who enters your house by the back door may be presentable, the one who comes through the basement is apt to be much begrimed and to carry a crowbar. Chiropractic was invented by D. D. Palmer, a practitioner of animal magnetism. It is a sort of hybrid between osteopathy and mental healing. An osteopath said that the course in chiropractic is practically the first three weeks of the course in osteopathy. The chiropractic system is founded on the idea that all disease is caused by pressure of the bones of the spine on the spinal nerves. This particular displacement of the vertebrae they call "subluxation," a phenomenon which does not actually exist. B. J. Palmer, the son of the originator of chiropractic, and the present head of the school, is a remarkable salesman. He instituted the "meal ticket" system of collecting fees, the "nonreturnable kimona" and the "neuro-calometer." He has built up a magnificent organization. He advertises over radio station WOC at Davenport, Iowa. (Newspapers are becoming more and more particular about the type of advertising matter they will accept for their pages, but the radio has not yet reached the stage of developing ethical standards.) At his home in Davenport he has a "Garden of St. Peter" to which persons are admitted for ten cents. Here he has a large spine collection which includes among other things the spine of a boa constrictor. There is also a library which, when finally opened at the request of an investigator, was found to contain "The Ladies' Home Journal," "The Woman's Home Companion," and "True Detective Stories." B. J. Palmer is the inventor of many slogans which are used in advertising his creed.

Ten years ago the school of chiropractic flourished with 3,000 students; last November it contained about 300; it is obviously on the decline.

Albert Abrams was the greatest medical quack. He had a good medical education but perverted it to ill use. His first departure was "spondylotherapy," the idea of which was to cure by pounding the spine with a rubber-tipped hammer. At this time everyone became interested in wireless telegraphy and the developments of electricity, so Abrams turned to his "electronic diagnosis and therapy." His machine consists of many intricate connections and wires to which there is no scientific order at all. The system is supported by such leaders of the "intelligentsia" as Upton Sinclair. Abrams died after four years of exploitation of this method, leaving an estate of millions of dollars. His machines were leased by him, not sold, but his courses of instruction were sold. His fortune also came from his school, his journal and many other sources. When he died there were possibly 2,000 practitioners of his system in this country, but now there are less than 100. He left a portion of his great fortune to found a college of electronic diagnosis and therapy in San Francisco. The college closed about three months ago and the building was found to have been constructed so that it would be suitable for use as a hotel.

The two developments out of the Abrams school were the Palmer thermopile arrangement which registers when placed upon the skin (thus, supposedly, indicating the seat of the disease), called a Neurocalometer, which sold for $3500, and the Wilshire Ionaco. This instrument consists of coils of wire. The virtue claimed for it is that it will cure a patient of any chronic disease if hung around his neck. It is supposed to magnetize the iron in the blood. Dr. Fishbein likened the possibility of accomplishing such a feat to the possibility of picking up spinach with a magnet. This device is advertised over the radio station WCFL ("the voice of labor") in Chicago. It has been dubbed the "magic horse-collar."

Another quackery existing today is the concern in New York City which sells a system of saving hair. It offers to diagnose hair conditions by examining hairs, sent through the mail, under the microscope. The Bureau of Investigation of the American Medical Association sent for diagnosis some hairs from fur coats and from the head of a girl who was obviously not suffering from any fault of the hair, and twine dyed to look like hair. In each case was returned the diagnosis of malnutrition of the hair roots, with recommendation of treatment with their nostrum.

There are also going about now various perversions of the scientific use of diet in the prevention and control of disease. Each emphasizes its own special point, such, for instance, as never mixing proteins and carbohydrates in the digestive system, never mixing acids and alkalies, and so forth. These systems also are advertised over the radio, with such slogans as,

"The more sugar you soak, the sooner you'll croak."

"The whiter your bread, the sooner you're dead."

"Good night, sleep tight, don't let the bed-bugs bite or you'll get small pox."

There are many lights, wires and radium devices for healing, as well as numerous glandular mixtures which were evolved soon after the discovery of the efficacy of thyroxin and other glandular extracts for treatment of certain conditions.

Another creed, so-called "naturopathy," is sponsored by Bernarr McFadden, notorious publisher of "Physical Culture" magazine. Its peculiarity is the avoidance of drugs, surgeons and other aids to therapeutics which it deems "unnatural." Eugene Debs went to the sanatorium near Chicago which treats by its methods and died a victim of its ignorance, and its treatment by starvation diet.

The cults come and go. The one charlatan who should concern us greatly is the licensed physician who disgraces the good name of medicine by fraudulent practice. Such are the "plastic" or beauty surgeons, following in the wake of the splendid results attained by re-construction surgery during the World War. The most notorious of these at the present time is H. J. Shireson, of Chicago, who, Dr. Fishbein said, has spent at least as much time in prison as in medical school.

P. T. Barnum said there is born in the United States a sucker every minute. Joseph Jastrow remarked that a crook is born every hour to take advantage of sixty suckers. The ratio is not likely to change in the future even with the birth of a great many eugenic babies.

## MISCELLANY

### FEEBLE-MINDED AND EPILEPTICS IN STATE INSTITUTIONS: 1927

NEW HAMPSHIRE

*Preliminary Report*

Washington, D. C., Aug. 14, 1928.—The Department of Commerce makes the following announcement for the State of New Hampshire concerning results of the 1927 census of feeble-minded and epileptics in state institutions.

The Laconia State School had a total of 41 first admissions during the year 1927, as compared with 50 in 1926, and 38 in 1922. The ratio of first admissions per 100,000 of population was 9 in 1927, as against 8.5 in 1922.

These first admissions represent patients received during the year, who had not previously been under treatment in any institution for feeble-minded and epileptics. Such newly admitted patients afford the best available measure of the number of new cases which are brought under institutional care during the year.

The extent to which provision has been made for the state institutional care of feeble-minded and epileptics is perhaps best indicated by the number of patients in the institutions on a given date. The number of patients present in the Laconia State School on Jan. 1, 1928, was 434 as compared with 144 on Jan. 1, 1910; and the ratio of such patients per 100,000 of the population increased steadily from 33.4 on Jan. 1, 1910, to 95.4 on Jan. 1, 1928.

Of the first admissions in New Hampshire during the year 1927, 24 were males, and 17 were females; and of the patients present on Jan. 1, 1928, 212 were males, and 222 were females.

These figures are based on reports furnished by the institution, with the co-öperation of the State Board of Charities and Corrections. The figures for 1927 and 1928 are preliminary and subject to correction.

| Year | First admissions during the year | | Patients present January 1 | |
|---|---|---|---|---|
| | Number | Per 100,000 of general population * | Number | Per 100,000 of general population # |
| 1928 | .. | ... | 434 | 95.4 |
| 1927 | 41 | 9.0 | 425 | 93.6 |
| 1926 | 50 | 11.0 | 406 | 89.6 |
| 1923 | .. | ... | 393 | 87.7 |
| 1922 | 38 | 8.5 | 388 | 87.0 |
| 1910 | .. | ... | 144 | 33.4 |

* Based on estimated population July 1.
\# Based on estimated population January 1, 1928, 1927, 1926, 1923, and 1922; and enumerated population April 15, 1910.

### TYPHOID FEVER AND CANCER DEATHS IN NEW HAMPSHIRE LOWER IN 1927

Dr. Charles Duncan, Secretary of the State Board of Health of New Hampshire, reports that there were only three deaths due to typhoid fever in that State in 1927, this record being the lowest in the history of this disease in the records of the Department. In 1926 there were eleven deaths and in 1925 fifteen. In 1927 six hundred and eight persons died of cancer against six hundred and eleven in 1926. Infantile paralysis has been less frequent this year up to this time, only eight cases having been reported as compared with fifty-six in the summer of 1927. The death rate in 1927 was 13.89 per thousand and in 1926 was 14.77. The mortality rate of infants under one year of age was lower than ever before in this State, the figures being 69.93 in 1927.

## SOCIETY NOTES

Acting on the authority given him by the House of Delegates at the annual meeting in May, the Speaker, Dr. Elmer H. Carleton, has appointed the following Committee on Medical Defense:

Thomas W. Luce, Rockingham County.
Robert J. Graves, Merrimack County.
Osmon H. Hubbard, Cheshire County.
Frederic P. Lord, Grafton County.
Henry C. Sanders, Jr., Sullivan County.
David W. Parker, Hillsboro County.
Ervin W. Hodsdon, Carroll County.
Clifton S. Abbott, Belknap County.
Louis W. Flanders, Strafford County.
Joseph J. Cobb, Coos County.

The Secretary-Treasurer, ex officio, is chairman, and the permanent Committee is to be elected by the County Societies, one member from each County. The Hartford Accident and Indemnity Company has agreed to make favorable rates with the membership and it is necessary for the members to transfer their insurance without delay, if now insured in another Company, or to take a policy with this Company if they are not now insured.

The President, Dr. Joseph J. Cobb, has named as the Committee on Medical Education:

Frederic P. Lord, Chairman, Hanover.
David W. Parker, Manchester.
Alpha H. Harriman, Laconia.

Time and place of 1929 meeting, Tuesday and Wednesday, May 28-29, at Manchester.

The first Clinical Meeting of the Society will be held at Hanover, Wednesday and Thursday, September 5-6, with an attractive program arranged by the Committee, Drs. Emery M. Fitch, Elmer H. Carleton, and John F. Gile.

## CHESHIRE COUNTY MEDICAL SOCIETY

The last meeting of the Cheshire County Medical Society took place at the Elliot Community Hospital, Keene, N. H., April 26, 1928. The president, Dr. Eleanor Tighe of Keene, N. H., presided. Dr. Elizabeth B. Reed was elected to membership. Under the literary program Dr. A. F. Weston, Keene, N. H., read a commendable paper entitled "The Appendix". Dr. Ira J. Prouty, Keene, N. H., read a very interesting historical paper on "Benjamin Doolittle, the first physician in the land of the Squeakeags and the Ashuelots". Dr. Prouty has promised to make it available later for publication. Dr. Wm. Howell of Boston, Mass., gave an instructive and practical talk on "The Chest in Infants". A general discussion followed. After adjournment lunch was served at the hospital.

*Courtesy of Dr. A. A. Pratte, Secretary of the Cheshire County Medical Society.*

## ROCKINGHAM COUNTY MEDICAL SOCIETY

Dr. Chester Howland has established a residence in Raymond, N. H., and has begun there the practice of medicine. Dr. Howland formerly practiced in Bradford, N. H. He then removed to East Orange, N. J. Dr. Howland recently took post-graduate work in New York City. He removed from East Orange, N. J., to Raymond, N. H., about one month ago.

The Rev. Dr. Ezra B. Pike, Brentwood, N. H., retired preacher and doctor, died at the home of his son in Brentwood, July the 9th, 1928, at the age of 96 years. He was born in Hiram, Maine, May 6, 1833, and received his theological training at the Bangor Theological Seminary. He later took a course in medicine at the Bowdoin Medical School, receiving an M.D. Dr. Pike came to Brentwood, N. H., forty years ago. Since that time he has served the community as both pastor and physician. The survivors are five sons, the Rev. Clarence Pike of Derby, Vt., Lee M. Pike of Norwood, Mass., Dr. Ezra B. Pike, Jr., of Lynn, Mass., Dr. Ernest Pike of Woodstock, Vt., and Ray Pike of Brentwood, and two daughters, Mrs. J. H. Heald of El Paso, Texas, and Mrs. Martha Sanborn of Acworth, N. H.

*Courtesy of Dr. John Knowlton, Secretary of Rockingham County Medical Society.*

## WOODSVILLE COTTAGE HOSPITAL

At a meeting of the Staff of the Woodsville Cottage Hospital held June 20th, 1928, the following officers were elected for the ensuing year: President, Dr. F. E. Spear, Woodsville, N. H.; Vice-President, Dr. L. E. McKinley, North Haverhill, N. H.; Secretary, Treasurer, Dr. R. G. Perry, Wells River, Vt.

It was voted to continue the meetings through the summer. They are held the second Monday evening of each month.

*Courtesy of Dr. George A. Weaver.*

## COOS COUNTY MEDICAL SOCIETY

The summer meeting of the Coos County Medical Association was held at Lancaster Inn on June the 28th. It was preceded by a luncheon served at the Inn. The program opened with an address and greeting by Dr. J. J. Cobb of Berlin, president of the New Hampshire Medical Society. Dr. Cobb spoke briefly, urging a continued earnest sincere effort on the part of the medical fraternity toward the relief of human ills, a sympathetic understanding of the afflicted, and a closer co-öperation among the medical men. The subject of "Insulin" was presented by Dr. Harry P. French of Hanover and Dr. Emery of Portland, Maine. The discussion was opened by Dr. H. H. Bryant of Gorham and Dr. W. E. Noyes of Colebrook. A spirited general discussion followed. Reports of delegates to the New Hampshire Medical Society meeting held at Manchester, N. H., and to the New England Medical Council meeting held at Belgrade, Maine, were given.

The meeting concluded with a clinic held at the Lancaster Hospital. The officers of the Society are as follows: President, Dr. H. E. Wilkinson, Berlin; Vice-President, Dr. Henry M. Wiggin of Whitefield; Secretary-Treasurer, Dr. Homer H. Marks, Berlin.

*Courtesy of Dr. Homer H. Marks, Berlin, N. H.*

# THE NEW HAMPSHIRE SURGICAL CLUB

The 31st annual meeting of the New Hampshire Surgical Club will be held at Gray's Inn, Jackson, N. H., September the 24th, 1928. A week-end outing for the members, friends, and guests will precede the meeting. Special rates have been secured from the Hotel. Golfing, fishing, boating, dancing, and opportunities of observing rare scenic beauty and grandeur will be available, including a trip to the top of Mt. Washington. Meeting will begin at 10 A. M. Monday with the presentation of "Preoperative Treatment" by Dr. James W. Jameson of Concord, N. H., and "Postoperative Treatment" by Dr. David W. Parker of Manchester, N. H., followed by a general discussion. The afternoon session will open at 1:30 P. M. with the annual business meeting, including the election of officers. This will be followed by four papers: President's address, Dr. E. M. Miller of Woodsville, N. H.; "Septicemia with Metastatic Osteomyelitis," by Dr. John P. Bowler and Dr. John J. Boardman of Hanover, N. H.; "Industrial Accident Surgery" by Dr. Murray H. Towle of Manchester, N. H.; "Surgical Problems" by Dr. Frank Lahey of Boston, Mass. A banquet will be held at 6:30 P. M. Dr. A. T. Downing of Littleton, N. H., the toastmaster, is arranging the program, which will include among its speakers the out-of-state guest, Dr. Frank Lahey.

Gray's Inn, Jackson, offers a particularly attractive location for the meeting, which bids fair to be one of the largest in the history of the Club.

The New Hampshire Surgical Club was organized in Concord, N. H., June 1st, 1896, by the following New Hampshire surgeons: Dr. William F. Smith of Hanover, N. H.; Dr. E. F. McQuestion of Nashua, N. H.; Dr. A. C. Heffinger of Portsmouth, N. H.; Dr. George D. Towne of Manchester, N. H.; Dr. Robert Burns of Plymouth, and Dr. Ira J. Prouty of Keene, N. H. Dr. E. F. McQuestion was the first president, Dr. Ira J. Prouty the first secretary. Of the founders of the Club, Dr. Ira J. Prouty is the only living member. The Club meets annually each fall and semi-annually each spring, the annual meeting being recreational and literary, the spring meeting clinical and literary. The present officers of the Club are:

President: Dr. Elmer M. Miller, Woodsville, N. H.

Vice-President: Dr. Daniel C. Norton, Manchester, N. H.

Secretary and Treasurer: Dr. John F. Holmes, Manchester, N. H.

Executive Committee: President and Secretary-Treasurer ex officio; Dr. John F. Gile, Hanover, N. H.; Dr. Carlton Metcalf, Concord, N. H.; Dr. Timothy Rock, Nashua, N. H.

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## Report of the Thirtieth Annual Meeting

The 30th annual meeting of the New Hampshire Surgical Club was held at Manchester, N. H., Tuesday, April 24, 1928. It began at 10 A. M. with a clinic at the Elliott Hospital by the staff under the direction of the staff committee of arrangements, Dr. Daniel C. Norton, chairman; Dr. David W. Parker, Dr. Geo. Dwinell, Dr. H. Scott Pattee. It was as follows:

### OPERATIVE CLINIC

Partial thyroidectomy for adenomatous goiter by Dr. David W. Parker, assisted by Dr. H. Scott Pattee, anesthesia by Dr. Norman B. Webber. Operation for prolapse rectum by Dr. David W. Parker, anesthesia by Dr. Benjamin P. Burpee. Operation Appendectomy, transverse incision by Dr. George C. Wilkins, assisted by Dr. George C. Dwinell, anesthesia by Dr. C. E. Dunbar. Operation, application of radium for carcinoma of the cervix by Dr. George C. Wilkins. Operation Astragalectomy for flail foot, by Dr. Ezra Jones, assisted by Dr. Harrison Powers, anesthesia by Dr. Benjamin P. Burpee. Operation for double inguinal hernia under local anesthesia by Dr. John F. Holmes assisted by Dr. Robert Flanders.

### DRY CLINIC

Splenic Myelogenic Leukemia with presentation of a case, Dr. Robert Flanders and Dr. John F. Holmes. Osteomyelitis with presentation of a case, Dr. George Dwinell. Discussion of X-ray plates by Dr. A. S. Merrill, Roentgenologist. Contraindication to ether from the standpoint of cardiology, Dr. Frederick P. Scribner.

The clinic was conducted with dispatch and in a commendable way. Credit is due Miss Beatrice Dugan, in charge of the operating room, and her efficient corps of nurses for their admirable assistance. The Club wishes to express appreciation to Mrs. Mary Ormiston, Superintendent of the Elliott Hospital, for her sympathetic and efficient co-öperation in making the clinic a success.

Following the clinic the meeting was adjourned to the Derryfield Club, 31 Mechanic Street, Manchester, N. H., where a splendid lunch was served to 89 members and guests.

Then followed the literary program:

"Focal Infection, from Viewpoint of Dentist," by Dr. F. A. Feuerhan, Portsmouth, N. H.

"Focal Infection, from Viewpoint of X-ray," by Dr. H. O. Chesley, Dover, N. H.

Discussion was opened by Dr. Thomas W. Luce, Portsmouth, N. H., and Dr. S. F. Eveleth of Concord, N. H., and was continued by Dr. Daniel C. Norton of Manchester, N. H., Dr. H. N. Kingsford of Hanover, N. H., Dr. John Murray of Concord, N. H., and Dr. Stephen Rushmore of Boston, Mass. This paper proved of unusual interest and it was brought out in discussion that there should be closer co-öperation between the medical and dental fraternities and that it would be desirable if the dental profession could become a special branch of the practice of Surgery.

The next subject, "Operative Treatment of Strabismus," was presented by Dr. Raymond Marcotte of Nashua, N. H., in a very interesting manner. Dr. Marcotte advised that Strabismus should be corrected if possible by glasses and if this failed operative measures should be adopted, emphasizing that this affliction should not be neglected, that children should be treated early and if necessary operated early in childhood. This paper was discussed by Dr. Charles F. Nutter of Nashua, N. H., and Dr. Daniel C. Norton of Manchester, N. H., and Dr. E. M. Miller of Woodsville.

The last paper, "Some Uses of Sugar in Surgery," was presented by Dr. Stephen Rushmore of Boston, Mass. An unusually well prepared and presented paper which proved of great interest. The discussion was opened by Dr. J. F. Gile of Hanover, N. H., and continued by Dr. Emery Fitch, N. H., Dr. W. W. Thompson of Manchester, N. H., Dr. Frederick P. Scribner of Manchester, N. H., Dr. George C. Wilkins of Manchester, N. H., Dr. Ella B. Atherton of Nashua, N. H.

These papers will appear in the NEW ENGLAND JOURNAL OF MEDICINE.

The following new members were admitted to membership: Dr. Luther A. March of Nashua, N. H., Dr. Demetrius Matsis of Nashua, N. H., Dr. Adolphe Provost of Manchester, N. H.

Recognition was taken of the death of a past president of the New Hampshire Surgical Club, the late Dr. Augustus A. Shea, and the following committee on resolutions was appointed: Dr. Frank E. Kittredge, chairman; Dr. Phillip McQuestion, and Dr. Timothy F. Rock of Nashua, N. H.

Recognition was also taken of the death of another honored member, Dr. Isaiah G. Anthoine of Nashua, N. H., and the following resolution committee was appointed: Dr. Arthur L. Wallace of Nashua, N. H., chairman; Dr. Raymond Marcotte, Nashua, N. H.; Dr. H. E. Thompson, Nashua, N. H.

## THE ROAD BEYOND

There is no death,—there's no such thing as dying,—
  But, when we go, we simply pass along
Into a realm of loveliness and beauty,
  Into a life of happiness and song.

There is no end to life,—'tis the beginning
  Of something far beyond the ken of man,
Another life more wonderful and holy,
  Beyond the measure of this world's short span.

And so, when you are thinking of your blessings,
  And count them over slowly one by one,
Do not forget that one which is awaiting,
  When days are ended and your work is done.

Just think of all the dear ones who are living
  And waiting in those happy realms of love,
And be prepared to greet, with joy and gladness,
  The coming of the Angel from above.

By JOHN F. HOLMES.

## CARBON MONOXIDE POISONING FROM IMPROPERLY VENTED AND ADJUSTED HEATERS

Another case of death by carbon monoxide poisoning recently came to the attention of the Connecticut State Department of Health. This was not because of the frequently talked of and dangerous practice of inhaling fumes from an automobile exhaust in an improperly ventilated garage. It was due to another common method of poisoning; fumes inhaled from a gas water heater not vented to the outside air.

Why do people persist in dwelling in rooms which are provided with gas burning appliances, particularly gas water heaters, which are not properly vented? Occasionally a whole family is quickly wiped out due to ignorance or carelessness in this regard. Every so often a sleeping child or mother meets death and we are struck anew with horror.

Carbon monoxide is a deadly poisonous gas which steals upon a person without warning as to odor. It is a product of incomplete combustion. In the ordinary hot water heater, the gas is mixed in the burner with a primary supply of air and the burning mixture also combines outside the burner with a secondary supply of air in the heater. If the air supply is plentiful and no obstruction exists, the combustion takes place completely. Occasionally an excessive primary supply of air may cause flash-backs and flames are thrown through the ports at high rates with dangerous results. Fortunately, people usually recognize this condition and turn the gas off. The most important cause of trouble is the lack of primary air supply, particularly in hot water heaters. This may be due to gradual clogging of the inlet air ports with dust or possibly to faulty adjustment. The gas flame in the heater then may rise to the point where it strikes on the coil pipe containing cold water. The resultant cooling may reduce the temperature of the gas below the combustion point. The incomplete combustion allows carbon monoxide to escape into the room and may cause sickness or death.

The venting of kitchen ranges is always desirable but the probability of trouble from these is remote. Trouble is possible if the burners are set too high and the inner blue cone of the flame strikes the vessel placed over it. Gas plates for heating water in the laundry are another possible source of trouble. The fact that gas plates and kitchen gas ranges are usually under supervision, are used customarily only for short periods of time, and are frequently accompanied by steam and odors which require ventilation, all helps to lessen the amount of trouble from them. The so-called "radiant glow" type of stove has been found likely to produce carbon monoxide gas whenever the radiants glow over three-fourths of the distance from the bottom to the top. This type of stove is not so common in this part of the country but is frequently used where natural gas is available.

An important fact is that it is only the carbon monoxide deaths that come strongly to our attention. There is no record of the headaches or general weakening of health by breathing in this poisonous compound. Remember that carbon monoxide deaths and sickness are easily preventable by proper precautions:

(1) See that your hot water gas heater is vented to the outside air. Some cities, such as Hartford, require that in new houses hot water heaters must be ventilated to the chimney or other outside flue.

(2) Sleep with your windows open. Escaping gas from a stove or furnace burning coal or from an improperly adjusted gas stove has caused many early morning headaches as well as more serious damage to persons sleeping without open windows.

(3) If your gas water heater or other gas appliance appears to be burning improperly, have the gas man fix it. It may waste your health as well as your fuel. If the flame in the usual form of gas water heater is more than eight inches in height above the burner, this is a sure sign that too much gas is being admitted and carbon monoxide production is likely.—Notes from the *Bulletin of the Connecticut State Department of Health.*

Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.

F. M. PAINTER, A.B., ASSISTANT EDITOR

## CASE 14291

## TEN MONTHS' DYSPNEA AT SIXTY-SIX

MEDICAL DEPARTMENT

*First admission.* An Irish-American lithographer sixty-six years old entered December 28 complaining of attacks of shortness of breath of ten months' duration.

He first noticed dyspnea on exertion two years before admission. His only other symptom at the time was morning cough, which he had had for years. Ten months before admission after walking home through a snow storm he was completely exhausted. The next day he had a similar experience. A few mornings later he awoke suddenly in an attack of breathlessness and smothering dull pain in the chest with profuse sweating, relieved by a hypodermic given by his physician. He had continued to have similar attacks at intervals of one or two weeks, continuing until his physician gave a hypodermic. For the past six weeks he had remained at home. His sleep was disturbed by dyspnea so that he had not stayed in bed later than three o'clock in the morning for six weeks. He had lost twenty pounds in ten months. His cough was now present not only in the morning but through the day and was often very severe, causing deep cyanosis and relieved by raising sputum. He had grown weaker. He believed that worry about a son had caused much of his trouble. He had had no urinary symptoms except partial urinary obstruction with pain in the lower back and abdomen for one day six weeks ago, when he gave up work.

His family history is negative.

His past history shows nothing significant except the morning cough mentioned, which he believed was due to smoking.

Clinical examination showed a poorly nourished man with evidence of loss of weight. On the right anterior tonsillary pillar was a small patch of yellow exudate. In each cervical region was a smooth firm non-tender slightly movable gland the size of a walnut. Chest emphysematous; expansion poor. Lung signs as shown in Figure 1. Apex impulse of the heart in the fifth space. Left border of dullness 12 centimeters from midsternum, 2.5 centimeters outside the midclavicular line. Sounds somewhat indistinct. Pulmonic second sound markedly accentuated. A short soft systolic blow at the apex. Radials thickened. Brachials possibly tortuous. Blood pressure 150/60 to 170/75. An electrocardiogram showed normal rhythm, rate 85, marked left axis deviation. Abdomen negative. A few very small hemorrhoidal tabs. Rectal examination incomplete because of fecal masses. Prostate no more enlarged than would be normal at his age. Varicose eczema over the shins. Moderate pitting edema from the knees down. Pupils reacted very sluggishly to light and accomodation. Fundi: discs very small; sclerosis. Reflexes normal.

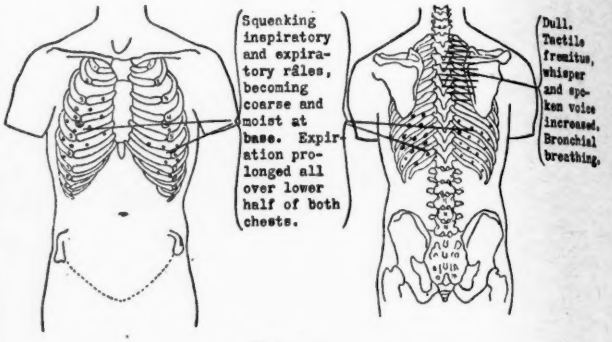

Squeaking inspiratory and expiratory rales, becoming coarse and moist at base. Expiration prolonged all over lower half of both chests.
Dull. Tactile fremitus, whisper and spoken voice increased. Bronchial breathing.

Figure 1.

Amount and specific gravity of urine normal, a slight trace to the slightest possible trace of albumin at two of three examinations, 0 to 2 leukocytes and 5 to 10 red cells per field at one. Renal function 25 to 50 per cent. Blood normal except for a red count of 3,740,000. Wassermann negative. Non-protein nitrogen 36. Sputum negative. Stool negative.

Temperature 97.4° to 102.8°, pulse 74 to 100, respirations 20 to 32.

X-ray examination showed the lung fields rather large. The lung markings were prominent throughout both chests. The hilus shadows were considerably increased in size and density. There was also marked increase in the size and density of the right descending bronchus. The diaphragm on this side was rather high and its respiratory movements were limited. The costophrenic sinuses were obliterated. The heart shadow was markedly increased in the region of the left ventricle. There was no increase in the supracardiac dullness, and only slight increase across the auricle.

The patient became completely psychotic, so that his subjective symptoms were of no value. He had attacks of severe dyspnea for which his heart condition did not seem to be responsible. Adrenalin, caffein, nitroglycerin and morphine gave little relief. Paraldehyde was used freely. January 3 he had extrasystoles and Cheyne-Stokes breathing. He was very unhappy and begged to be allowed to die at home. He was therefore discharged January 8.

*History of interval.* After his discharge he spent his days in an easy chair, continued digitalis, made steady improvement, and by May was taken to and from his shop daily, where he sat and directed the work. This continued

until November. Then he began to have more dyspnea and more frequent attacks of pain, requiring hypodermics three times a week to twice a day. The dyspnea had not been much worse for the past three months. For several months before he reentered his cough had been less but his throat had been sore. Recently he had noticed red streaked yellow sputum. He had been intoxicated for three weeks. For five nights he had not been able to sleep.

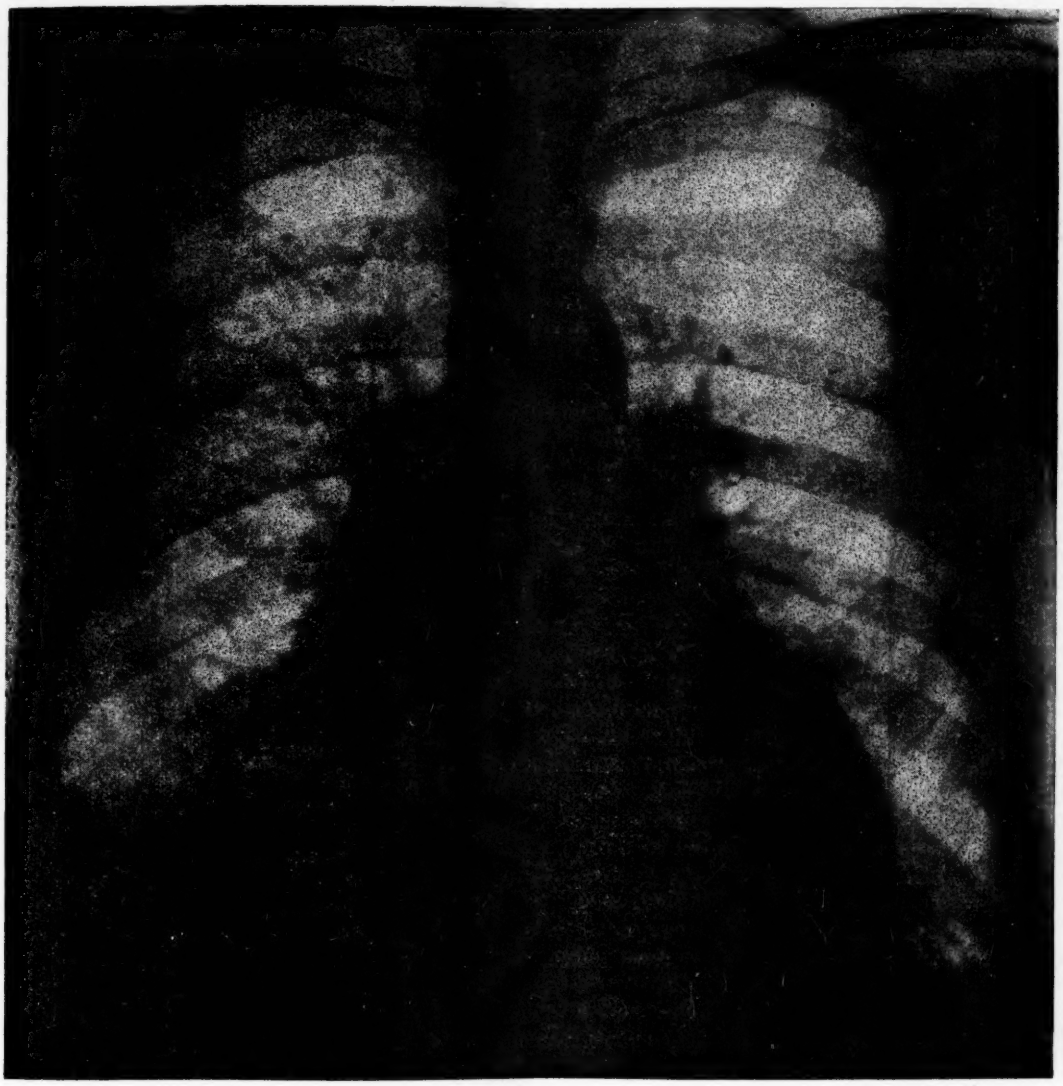
*Second admission*, February 27, thirteen months after his discharge.

Clinical examination was as before except as noted. Lips and face cyanotic. Slight exophthalmos. Whites visible around entire pupil. Marked lid lag. Tongue showed a heavy brown coat. Lung signs as shown in Figure 2. Left border of cardiac dullness 13.5 centimeters from midsternum, 4.5 centimeters outside the midclavicular line. Sounds of poor quality. Systolic murmur as before at the apex, heard less distinctly at the base. Blood pressure 180/90 to 110/50. Some tenderness in the right upper quadrant. Liver edge not definitely felt.

Amount of urine not recorded, specific gravity 1.014 to 1.018, the slightest possible trace to a trace of albumin at both of two examinations, 2 to 8 leukocytes at both sediment examinations, 15 to 20 red cells at one, occasional granular casts at one. Renal function 20 per cent. Blood normal at entrance, February 29 leukocytes 12,900. Wassermann negative. Non-protein nitrogen 36.

Temperature 99° to 101.3°. Pulse 90 to 112. Respirations 34 to 15.

X-ray examination showed the total transverse diameter of the heart to be within normal limits. The apex of the left ventricle was some-



CASE 14291. First admission. The lung fields are unusually large and bright. The lung markings are prominent throughout both chests. The hilus shadows are considerably increased in size and density. There is also marked increase in the size and density of the right descending bronchus. The diaphragm on this side is rather high. The costophrenic sinuses are obliterated. The heart shadow is markedly increased in the region of the left ventricle. There is no increase in the supracardiac dullness, and only slight increase across the auricle.

what blunt, suggesting hypertrophy. The aorta appeared tortuous. The knob was prominent. Examination of the ileocecal valve was unsatisfactory, as the patient was unable to hold the enema.

The night of admission and the following day the patient was very psychotic. There was marked Cheyne-Stokes respiration. Because of his recent alcoholic adventures sedatives even in large amounts were ineffectual. February 29 the

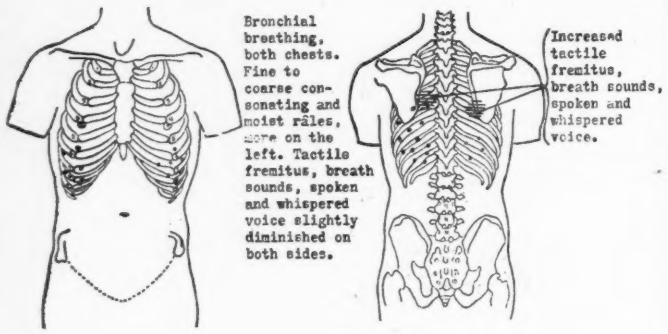

Bronchial breathing, both chests. Fine to coarse consonating and moist râles, more on the left. Tactile fremitus, breath sounds, spoken and whispered voice slightly diminished on both sides.
Increased tactile fremitus, breath sounds, spoken and whispered voice.

Figure 2.

respiration ceased to be of the Cheyne-Stokes type. The morning of March 2 he became very cyanotic. The pulse was 130 and weak, the blood pressure 120/70. That morning he died.

## Discussion

BY RICHARD C. CABOT, M.D.

### NOTES ON THE HISTORY

Anyone who watches cardiac patients is struck by the way they give out in cold weather and especially when there is snow around, not only in the air but under foot. The extra muscular exertion required under these conditions is an addition to one's ordinary exertions that we do not realize in good health. Partly, I think, because they are breathing cold air with its tendency to make them cough and wheeze, and partly because of the extra exertion, these patients give out in cold weather.

The other fact about cardiac patients that becomes familiar on watching them is that they have worse dyspnea at night than they do during the day. I do not think this has ever been satisfactorily accounted for. But it is certainly the fact that when people are on the edge between constant dyspnea and a comfortable state their worst hours are the night hours, and irrespective of whether they sit up or lie down.

What guesses should be in our minds as we begin to examine him?

Certainly cardiac disease as the most probable thing, and at his age the commonest kind of cardiac disease, namely the hypertensive type, with the coronary type second. He has had no pain, so that one cannot so far make a diagnosis of coronary disease. It is not at all likely that it is either the rheumatic or the syphilitic type.

### NOTES ON THE PHYSICAL EXAMINATION

"Emphysematous" is a term that should not be used here. What they mean is "barrel-shaped" chest with general hyperresonance.

If the signs at the right back go as far down as the shading indicates it is significant. If it is only above the spine of the scapula it is not.

Left axis deviation corresponds to hypertrophy of the left ventricle.

The prostate was not enlarged by rectum. It may have been enlarged so as to give obstruction without being enlarged by rectum.

Sound kidneys are probable. There is some slight irritation, probably not connected with the kidney but with the bladder.

The chart gives us a very different impression from what we have if we are told that the temperature went as high as 102°. This is essentially a normal temperature chart. That is what we want to know. The pulse also is strikingly normal in rate. So we have no reason to think there is any pneumonia at that right top,—the suspicion which was in our minds, from the signs as we are given them.

What discharge diagnosis shall we make? I think we should say hypertensive heart disease. He certainly had hypertension and he certainly had heart disease, and no evidence of any other disease.

A Physician: Had he any coronary block?

Dr. Cabot: I do not see the evidence.

A Physician: He had pain.

Dr. Cabot: "Smothering dull pain in the chest" I do not think is like the pain of cardiac infarction, which is not a dull pain usually, but a very severe pain. The sudden attacks of dyspnea are more like infarction, but without pain I do not see how we can say more.

We are coming more and more to realize, during the last two years especially, how common cardiac infarction is and how relatively mild,—how many people have it and get over it for months or years and then die of something else or of a second infarction. But I do not see here the evidence to show anything more than a weak heart, presumably hypertensive. His kidneys were sound, and there is no evidence of disease elsewhere.

A Physician: Did he probably have a transient attack of asthmatic bronchitis?

Dr. Cabot: It is hard to tell. On the whole I think I should say no, because of the low temperature. All the râles can be accounted for by passive congestion. The dullness is in a queer place for an asthmatic. I do not see how we can absolutely affirm bronchitis or negative it, but such evidence as there is seems to me against it.

Probably the hospital surroundings were uncongenial and that is one reason he did not do well here.

For a number of months he was getting along fairly well and going to work. It is well to remember that when we see a man as badly off as he was in the beginning of this record.

Cold weather, as already said, is the heart patient's curse. Well-to-do people who can go south and stay south can live a good deal longer and certainly more happily as their hearts begin to give out.

"More dyspnea and more frequent attacks of pain" sounds more like coronary trouble.

Exophthalmos has been mentioned by various writers in connection with chronic nephritis. If it goes with chronic nephritis it probably goes with hypertensive heart trouble, since those two diseases run into each other so much.

Unless we really believe that a person has pneumonia throughout both lungs we have no right to write down a phrase like "bronchial breathing, both chests". What they really mean is probably prolonged wheezy expiration. The fremitus, breath sounds and whisper would not be diminished if there were bronchial breathing. The lung is probably in the same condition as before. I think edema of the lungs is all we can say.

If the same man made these second cardiac measurements under the same conditions, the heart is probably larger than before.

MISS PAINTER: It was a different man.

DR. CABOT: So that it is of no importance whatsoever. Any two men may percuss two centimeters' difference.

The blood pressure measurement of 100/50 was probably at the end.

These are normal kidneys.

There is nothing in the blood.

The chart shows a steadily though very slightly rising temperature. It did not get much above 99° until the very end, so it does not amount to much as evidence of infection.

### DIFFERENTIAL DIAGNOSIS

I have nothing to add to what I said at the end of his first hospital stay, except that the possibility of cardiac infarcts, presumably old, with myocardial scars, is greater at this time than it was the first time. But it does not seem to me that we have at all a clear history of coronary and myocardial trouble. The history is probably rather unreliable anyway, so we must be prepared to find something of that kind even though we cannot predict it. On the basis of the history all we can predict is hypertrophy and dilatation of the heart, general passive congestion, and the cause hypertension. As to the question of possible emphysema of his lungs, I do not think emphysema can be diagnosed except by X-ray evidence.

DR. GEORGE W. HOLMES: This plate was taken especially for the lungs. The lung fields are unusually large and bright, and of the type that we expect to see when there is some emphysema present. The diaphragm is considerably lower on the left than on the right, even more than the anatomical normal should be. Then the angle between the chest wall and the diaphragm on the right side is apparently obliterated, the appearance that we associate with pleurisy, sometimes a small amount of fluid. The hilus shadows are definitely increased. Of course it is disputed what constitutes a normal or an abnormal hilus, but there are cases where the changes are gross. I think we are justified in saying they are abnormal. Then the markings running out into the lung fields are larger than usual, and there are some lines that might be the interlobar septum. We should interpret it, so far as the chest is concerned, as emphysema, pleurisy at the right base, and peribronchial fibrosis or thickening due to some infection. Part of the change may be due to the condition of the heart.

I have not read over the report. I hope I am not making a different statement today.

The next plate was taken especially for the study of the heart, and differs from the other in that it is taken at a different phase of respiration. The first was taken at full inspiration. This was taken during quiet breathing, and would be halfway between full inspiration and full expiration. The heart shadow is obviously enlarged. The increase is more marked toward the left, and the shadow of what we interpret to be the left ventricle is distinctly prominent. There is no marked increase in the supracardiac shadow, but there is some across the base. If the transverse diameter of the supracardiac shadow is normal the chances of there being any dilatation of the aorta are very remote. There is not much evidence of arteriosclerosis either. That usually gives some increase across the base.

This we should interpret as hypertrophy of the left ventricle. It could be due to long-standing high blood pressure or disease of the aortic valve. We have no means of knowing which unless the aorta is dilated. Then we suspect aortic disease. The shadow across the base of the heart probably represents some dilatation of the auricle. This might be interpreted as rheumatic heart, or we could say hypertrophied left ventricle, broken compensation. That of course would fit very nicely with the changes in the lung and failing compensation. So that our impression of the heart would be against rheumatic with multiple valvular lesions and in favor of high blood pressure with broken compensation.

DR. CABOT: I should not have known enough from the physical signs as given us to make the diagnosis of emphysema as Dr. Holmes has made it. I am much interested to see if it happens in this case, as it has in others, that the X-ray comes out right when we could not tell by other methods of examination.

A PHYSICIAN: How about the glands in the cervical region?

DR. CABOT: I do not know what to say about those glands. Anyone who makes physical examinations has to say that many times. Some-

times we can explain them and more times we cannot. I cannot explain them.

X-RAY INTERPRETATION, FIRST ADMISSION

The lung findings are probably due to a moderate amount of emphysema.

General thickening of the lung markings. Pleurisy at the right base.

X-RAY INTERPRETATION, SECOND ADMISSION

The findings are those of arteriosclerotic heart disease.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Hypertensive and arteriosclerotic heart disease.
Cardiac asthma.
Congestive failure.

DR. RICHARD C. CABOT'S DIAGNOSIS

Hypertensive heart disease.
Possibly cardiac infarcts with myocardial scars.
Hypertrophy and dilatation of the heart.
General passive congestion.

ANATOMIC DIAGNOSES

1. *Primary disease.*

Arteriosclerosis of the coronary arteries, the aorta and the kidneys.
Fibrous myocarditis.

2. *Secondary or terminal lesions.*

Chronic passive congestion, general.
Metastatic carcinoma in liver, (primary source not found).

3. *Historical landmarks.*

Chronic prostatitis.

DR. TRACY B. MALLORY: A very much hypertrophied heart, weighing 590 grams, was found. Both ventricles were dilated, the walls hypertrophied, both right and left. The valves were entirely negative except for a few patches of atheroma. The coronary arteries showed rather marked calcification, the lumen considerably narrowed, below half normal diameter, but nowhere obliterated. No obvious gross scars were found in the myocardium, so infarct can be definitely ruled out. Microscopically, however, numerous minute areas of fibrosis were found. The aorta showed a moderate degree of arteriosclerosis. The lungs showed emphysema and chronic passive congestion.

The liver showed marked chronic passive congestion. The kidneys were normal in size. The weight was 390 grams, but a considerable portion of that was pelvic fat. I do not think they were enlarged; however, they certainly were not markedly diminished in size. The capsules stripped with some difficulty, leaving finely granular red surfaces,—the ordinary signs of diffuse arteriosclerosis in the kidney which we expect to get with hypertension.

The head showed a distinctly edematous brain, which checks up with his alcoholic history of the last few weeks. There was considerable arteriosclerosis of the cerebral vessels.

There was one other finding, a complete surprise, that perhaps explains the question regarding the cervical glands, though the neck was unfortunately not dissected. Numerous small metastatic foci of cancer were found in the liver, but we were unable to find any source for it in the prostate, pancreas, or gastro-intestinal tract. The thyroid is a possibility of course, though the microscopic appearances do not suggest it and the absence of pulmonary metastases is much against it.

DR. HOLMES: Those changes around the root of the lung would probably be passive congestion?

DR. MALLORY: I think so. We did not find anything else to account for them.

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## CASE 14292

## PAIN IN THE BACK AND HIP FOLLOWING RESPIRATORY INFECTION

MEDICAL DEPARTMENT

An Italian shoemaker twenty-nine years old entered April 10 for study.

Five weeks before admission he had a "cold" which "settled in his back and then spread to his right hip." Since that time he had had continuous pain in the region of his right hip on sitting or lying down, at times radiating down the leg. When he walked the pain soon wore off. Since the onset he had not been able to work. Whenever he had a cold "it settled in his back," but he had never had any trouble of this sort before. X-ray examination in the Out-Patient Department the day before admission showed no definite abnormality of the pelvis. The portion of the femur included on the film showed apparent slight thickening of the shaft and a little bowing. The skull showed no abnormality.

His past history is negative except for constipation.

His mother had kidney trouble.

Clinical examination showed a well nourished man not apparently ill. Left dorsal, right lumbar scoliosis with marked lowering of the left shoulder. There was some tilting of the pelvis up on the right when the patient stood. The right buttock was smaller than the left. There was a soft non-tender tumor running from the crest of the ilium along the posterior aspect of the bone nearly down to the trochanter. This gave the appearance of an abnormality of the hip joint, but there was no sign of dislocation or other deformity of the hip. There was limitation of flexion of the right hip as well as of abduction and internal and external rotation. These motions were only slightly restricted.

Forced motion was painless. The right trochanter seemed lower than the left. There was one-quarter inch shortening from the anterior-superior spine to the internal malleolus on the right, possibly due to asymmetry of the pelvis. There was no atrophy of the leg or thigh muscles. The right knee-jerk was markedly diminished and hard to elicit, the right ankle-jerk slightly diminished. There was an indefinite area of hyperesthesia over the midportion of the right shin and on the inner midthigh.

Amount and specific gravity of urine not recorded, alkaline, no albumin or sugar, sediment negative. Blood: 9,700 leukocytes, polymorphonuclears 80 per cent, hemoglobin 80 per cent, red count not recorded. Wassermann negative. Tuberculin tests, bovine and human, both positive.

Before operation temperature 98.4° to 101.2°, pulse and respirations normal.

April 11 the right thigh and hip were explored. The swelling over the hip proved to be hypertrophied tensor fascia femoris. The hip margin was exposed. No gross pathology was seen. Sections were taken from the gluteus medius and also from the synovia of the hip joint.

After operation the temperature was elevated, 100° to 103.1°, for two days. The patient had a little cough but no chest signs. The hip was kept in traction for five days. After the traction was removed the patient was quite comfortable. At the time of his discharge, April 24, the wound was solid. There was partial anesthesia over an area on the front of the right thigh. The right knee-jerk was absent, the left normal. There was a suggestion of Babinski on the right. Motions of the right hip: flexion to 80°, abduction to 35°, adduction to 30°, complete extension. At discharge it was believed that the patient would show more neurological findings later.

## Discussion

### BY A. V. BOCK, M.D.

### NOTES ON THE HISTORY

The time of year is a thing that is worth thinking about from the point of view of diagnosis, because you know there is a seasonal variation of certain diseases like acute rheumatic fever in the spring, typhoid fever in the autumn and summer, anterior poliomyelitis in the summer, practically never in the winter; so that that is one point you really ought to think about when seeing a patient.

That cold he had five weeks before admission makes one wonder whether the problem coming has anything to do with a preliminary acute infection.

The fact that his mother died of kidney disease has nothing to do with this history.

### NOTES ON THE PHYSICAL EXAMINATION

Lowering of the left shoulder is what you would expect with that type of scoliosis.

The limitation of motion in the right hip suggests that whatever this lesion is, it does have an influence either on the joint itself or on the group of muscles controlling the movement of the joint.

The apparent lowering of the right trochanter has nothing to do with the hip joint in this case.

Even without asymmetry of the pelvis, if all of us in this room had those measurements made very few of us would prove to have measurements corresponding in both legs to within a quarter of an inch. Sometimes too much emphasis is placed on such differences.

There is no atrophy of the leg or thigh muscles. That is important because it suggests absence of nerve injury.

I cannot explain the diminished right knee-jerk from the neurological point of view. If this were a lesion inside the cord in the pyramidal tract one could account for diminished or absent knee-jerks. If the lesion is outside the spine and has to do with a peripheral nerve one would not expect absence of the knee-jerks, but would I think be more apt to find evidence of foot drop or other trouble with the foot itself.

Dr. Tracy B. Mallory: It is fair to say that there was very marked diffuse tenderness over the thigh and also the lower leg.

Dr. Bock: Was there no redness or swelling?

Dr. Mallory: No.

Dr. Bock: Both tuberculin tests being positive does not mean very much in an adult. I see no evidence of a bone lesion in the pelvis anywhere or in the lumbar vertebrae. What that slight thickening of the femur means I am sure I do not know.

Exploration of the thigh and hip showed nothing so far as this description goes.

I hope there are better neurologists here than I am to account for that picture at discharge. I should have liked to see the patient to see if the observations were correct. With an absent knee-jerk you do not very often see a positive Babinski. A suggestion is different from stating definitely that it was there, but I do not see how it could be possible to have a Babinski in that leg.

### DIFFERENTIAL DIAGNOSIS

If you want to venture a diagnosis it will be interesting to see what you think about it. It is very difficult to make a diagnosis in this kind of case even if you have the patient before you and check up the findings yourself. A case written up like this, that is observations of several different men, a case in which no neurologist ever saw the patient and went over the condition carefuly and completely described what he found, is a very difficult case for diagnosis.

I can think of very few possibilities in this case, and I am very sure that the things that I think of are not correct. One thing that I think of is what the orthopedists may have thought it was, tuberculoiss of the joint. This case, however, had a very rapid onset and altogether is

quite unlike the sort of picture one gets with involvement of the hip joint due to tuberculosis. Here the evidence suggests a lesion outside the joint rather than in it, a local muscle lesion outside the joint itself.

Another condition that sometimes simulates a tuberculous joint is hemophilia. There again the condition is a chronic one due to recurrent hemorrhage into the joint and does produce X-ray changes not unlike those due to tuberculosis; but the lesion can be demonstrated in the joint without any difficulty. My feeling is that this thing is outside the joint. What sort of possible tumor this can be I cannot even conjecture. The history of a preceding infection and the persistence of symptoms dating from that time seem to me to make the possibility of a tumor not so likely as the results of an acute infection.

Whether the operator expected to find a pocket of pus in the joint at the time of this operation I do not know, but I imagine that is what was in the back of his mind.

I can think of no other possibilities. I cannot imagine the diagnosis in this case.

A STUDENT: Was there any evidence of disease in the lumbar spine in the X-ray?

DR. BOCK: I do not see anything at all. There are pretty clear margins here and the intercapsular discs seem to be all right.

A STUDENT: Did the patient have any eosinophilia?

MISS PAINTER: The blood report does not give the eosinophils.

A STUDENT: Is there a possibility of spinal cord tumor?

DR. BOCK: There is a possibility. I think a lumbar puncture might have been of some use, although it seems to me this is largely outside the spine.

A STUDENT: Could you consider tuberculosis of the spine?

DR. BOCK: It is possible but not likely.

A STUDENT: How do you rule out a nerve lesion?

DR. BOCK: I have not ruled it out. I believe there is a nerve lesion, but what it is I cannot tell you.

A STUDENT: You said there was no atrophy of the leg and thigh muscles?

DR. BOCK: You see asymmetry of the buttocks in connection with any long-standing scoliosis. It does tilt the pelvis. Whether this is responsible for the suggestion of an acute lesion I cannot make out.

A STUDENT: Do you ever find neuritis of the femoral nerve alone?

DR. BOCK: I do not know.

A STUDENT: Was the limitation of motion active or passive?

DR. BOCK: I should say there was decidedly a small active limitation of the joint, probably from muscle spasm.

A STUDENT: What kind of cold goes to the back and then to the leg?

DR. BOCK: Almost any of the so-called common colds can produce acute myositis. Acute respiratory infection commonly produces aches and pains, most often in the back. But so far as producing a focal infection, that would be a difficult question to answer. If the organism came from the cold it would probably be a staphylococcus. Most of the throat infections are streptococcus.

DR. MALLORY: This is a rather unfair case, but I think it is a very good one to point some morals, of which the chief is the importance of an accurate differential count. The man who asked about the eosinophils was on the right track, because the case was one of trichinosis. The muscles removed showed the parasites. If trichina had been thought of before operation they would have asked if he had eaten pork recently, and they would have done a careful differential count for eosinophils. They would have paid more attention to whether it was hyperesthesia of the skin or deep tenderness of muscles. The loss of knee-jerks does occur in trichinosis occasionally, so that I think that can be explained, and also the myositis was probably responsible for the appearance of swelling.

The unusual thing about the case is the sharp localization of the process apparently over one group of muscles in the right leg. There seemed to be no involvement of the muscles of the left leg or elsewhere. Usually where a single group of muscles is involved it is more apt to be in the leg than in the arm, but it is usually bilaterally symmetrical.

DR. BOCK: A severe infection with trichina can give no signs of muscle soreness. The usual history is of a gastro-intestinal upset followed by persistent diarrhea which may last for two, three or four weeks and is associated always from the beginning with the development of soreness of the muscles. If the infection is in the diaphragm and very marked there may be considerable disturbance of breathing owing to interference with diaphragmatic action, and instead of being localized in the muscle and hip as this was, most of the picture may be confined to the diaphragm itself and be very confusing. This history is quite atypical for trichina. One does see an occasional case with diarrhea and a little fever without any signs of muscle tenderness or soreness of the thighs and with eosinophils of 20, 30 or 40 per cent. Then we do an excision of the muscle for Dr. Mallory to see whether or not the presence of trichina can be demonstrated.

### DIAGNOSIS

Trichinosis.

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## THE PROPOSED BOSTON PATHOLOGICAL INSTITUTE

THE last number of the Rockefeller series on methods and problems of medical education[1] contains a proposal for the establishment of a Boston Pathological Institute. Dr. Timothy Leary, Medical Examiner of Suffolk County (South), presents in his exposition of the Massachusetts medicolegal system a clear and striking solution for the numerous problems that confront those interested in the training of future medical examiners, and in making the best use of the large mass of material of value from the scientific standpoint that comes to the hands of the medical examiners.

One is startled in reading this monograph of the Rockefeller Institute by the great advantages possessed by Europe in medicolegal work. For example, we see descriptions of elaborate institutes of legal medicine in Graz, Cairo, Sienna, Cracow, Lemburg, Lisbon, and Bucharest as well as in better known medical centers. The relatively poor showing made by America in this line of work is a striking commentary on the effect of the coroner system on legal medicine. From the standpoint of either protection of the community or scientific progress the coroner system is outworn and as antique as is the office of coroner itself. The abuses of the coroner system were only too well known in Massachusetts, and were strikingly summed up in the report of of Tyndale[2] in this JOURNAL, fifty-one years ago.

The establishment of the medical examiner system, the fiftieth anniversary of which was recently commented on editorially in this JOURNAL, has meant to the people of Massachusetts far more than they realize. That it may mean still more, the Boston Pathological Institute is proposed, an institute in which there would be an opportunity for the medical examiners outside Suffolk County to gain additional postmortem experience and pathological training, and where there would be a central laboratory with facilities for routine toxicological and serological examinations as well as research in the neglected field of legal medicine. Moreover, from the standpoint of teaching, the medicolegal pathological material is of striking advantage, owing to the large numbers of cases of sudden death where early rather than terminal manifestations of disease may be seen and studied. It would be a great advantage to all the citizens of Massachusetts, and particularly to the medical profession of the State, if this proposed pathological institute could be transferred from paper into brick and mortar in the Boston City Hospital group.

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1 Methods and Problems of Medical Education. Ninth Series. Institutes of Legal Medicine. Rockefeller Foundation, 1928.
2 Tyndale, T H.: Boston Medical and Surgical Journal, xcvi, 243, 1877.

## THE BIOLOGY OF ALLERGY

DR. WARREN T. VAUGHAN, in an address delivered before the Virginia Academy of Science and published in *Science*, has given as clear a conception of the probable biology of hay fever and asthma as may well be found. Most of us are familiar with the phenomena of anaphylaxis and allergy; most of us know that the introduction of foreign proteins into the living body gives rise to these phenomena; we are less familiar with the detailed biologic explanations of them.

Although, at the beginning of this century, it was realized that the inoculation of guinea pigs through the skin with various proteins would give rise to fatal symptoms resembling asthma if the inoculation were repeated after an interval of ten days or two weeks, it was not until 1910 that this knowledge began to be successfully applied toward an understanding of the cause and relief of the allergic diseases.

The theories of anaphylaxis, meaning without protection, and of allergy, meaning literally altered energy, are interesting, depending as they do on the incomplete break down of foreign protein in the body. Not more than twenty amino-acids are to be found in native proteins, and yet, like the letters of the alphabet, their possible

combinations into proteins are limitless. A fundamental law is that whenever a living cell comes into contact with a foreign protein it elaborates an enzyme to reduce that protein into its constituent amino-acids.

However, when a foreign protein is injected directly into the body of a guinea pig thus sidestepping normal gastrointestinal digestion, the foreign body appears in the blood and lymph and changes the immediate environment of the body cells. The body cells so stimulated set to work to manufacture a specific enzyme. As the constituent amino-acids are taken away from the protein, a stage is reached in which the remaining portion of the molecule is extremely poisonous, and this poison gives rise to anaphylactic shock. In normal enteric digestion anaphylaxis does not occur, because digestion is really taking place outside of the body, in the stomach and intestines, and while the protein poison is probably formed at one stage in digestion, at another stage it is still further broken down into harmless amino-acids before absorption through the mucous membrane takes place.

Why repeated injections of the offending protein will eventually immunize the subject against this anaphylaxis we do not know, but we assume that with this continuous introduction the velocity of the chemical reaction is slowed up so that the protein poison is liberated more and more slowly, while the body cells themselves become increasingly resistant to the attack.

Conservatively only about 10 per cent. of the general population is predisposed to allergy, and curiously enough it tends to be an hereditary predisposition, following the Mendelian Law, probably as a dominant characteristic. Specific sensitizations are not inherited, but simply the tendency to become sensitive; thus in succeeding generations we may find sensitization to egg white, timothy or chicken feathers, manifesting themselves as hay fever, asthma, eczema or migraine.

## MIDWIVES IN NEW YORK CITY

To those people who believe that the midwife is an important factor in the problems of maternity work among certain classes of society, the decreasing number of midwives in New York City is of interest.

In 1909 there were 3131 midwives in New York City who attended 49,616 births. The number of midwives and the births reported by them have declined so that there were 1262 registered midwives who reported 20,959 births in 1927.

## THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

MCIVER, MONROE A. A.B., M.D. Harvard University, 1917; F.A.C.S. Assistant Professor of Surgery, Harvard Medical School; Assistant Visiting Surgeon, Massachusetts General Hospital. His article is entitled: "Intussusception of the Small Intestine with Special Reference to Meckel's Diverticulum as a Causative Factor". Page 453. Address: Massachusetts General Hospital, Boston, Massachusetts.

BIRNIE, JOHN M. A.B., M.D. Harvard, 1906; F.A.C.S. Visiting Surgeon, Springfield Hospital; Visiting Surgeon, Mary Lane Hospital, Ware; Visiting Surgeon, Morison State Hospital; Consulting Surgeon, New England Shrine Hospital; President, Massachusetts Medical Society; Secretary, New England Surgical Society. His article is entitled: "Suprapubic Prostatectomy". Page 456. Address: 14 Chestnut Street, Springfield, Massachusetts.

CORBETT, J. J. A.B., M.D. Harvard, 1906; F.A.C.S. Ophthalmic Surgeon-in-Chief, Boston City Hospital; Chief Surgeon, Eye, Ear, Nose and Throat Department, Malden Hospital; Consulting Ophthalmic and Aural Surgeon, Whidden Memorial Hospital, Everett. His article is entitled: "Tear-Sac Surgery". Page 459. Address: 520 Beacon Street, Boston, Massachusetts.

HIMES, NORMAN E. B.S., M.A. Sometime Robert Treat Paine Fellow in Social Ethics, Harvard University; Fellow Social Science Research Council; Instructor in Economics, Simmons College, Boston. His article is entitled: Charles Knowlton's Revolutionary Influence on the English Birth-Rate". Page 461. Address: 121 Holden Green, Cambridge, Massachusetts.

COBB, JOSEPH J. M.D. Maine Medical School, 1881. President, New Hampshire State Medical Society, 1928-1929. His article is entitled: "The General Practitioner of Medicine and His Relation to Surgery". Page 466. Address: Berlin, New Hampshire.

FISHBEIN, MORRIS. B.Sc., M.D. Rush Medical College, 1912. Editor of the *Journal of the American Medical Association* and of *Hygeia, the Health Magazine*, Chicago; Assistant Clinical Professor of Medicine, Rush Medical College. His articles are entitled: "Socialized Medicine" and "Frauds and Quackery in Medicine". Page 472. Address: 535 N. Dearborn Street, Chicago, Illinois.

## THE DOCTOR'S SADDLE BAG

### HEALTH HAZARDS

It is a curious inconsistency and a sad commentary on human nature that man, through bigotry, ignorance or sheer dollar selfishness, seeks constantly to deprive himself and his fellows of one of their most cherished heritages—that of health. The newspapers and the magazines are full of instances of perverse health hazards, unnecessary and uncalled for, and instigated purely by selfishness. Quack medicines, fake cures and insidious propaganda are constantly bombarding us through the medium of the advertising sections of our press, all designed purely for the manufacturer's interests, all claiming to have our interests at heart; many of them actually dangerous to health. This danger may not come directly through the use of the advertised preparation, which may be harmless. It lies in the fact that self-treatment without diagnosis is advocated, whereby actual disease may be allowed to reach an incurable stage unrecognized and improperly treated. It lies in the fact that the idea of actually non-existent disease is raised in the mind of the credulous reader and a state of mental ill health is implanted.

Malodorous incidents have recently come to light where the spectre of cancer has been inculcated in the minds of innocent victims suffering only from too much faith in mankind; their money has been taken for false cures and they have eventually been driven to suicide. Man's inhumanity to man is still a cause of deepest mourning.

The quack medicine industry and the borderline health beggars—the coiners of the famous word halitosis which has been worth millions (i. e., halitus, a vapor; an expired breath—suffix, osis, a disease: The reader is invited to draw his own conclusion). The inspired inventors of those cryptic initials B. O. meaning body odor, always whispered with bated or halitotic breath—these respected patrons of the *Saturday Evening Post* are the world's best gold brick sellers of the age. In this great human zoo of which we form a part these are the health hyenas.

This, of course, is sheer commercialization of health. The quack medicine and fake cure vendors are purely and simply charlatans and frauds. The body odor removers and the purgers of the temple of pyorrhea are perhaps somewhat less fraudulent, but only a little so. They also are obtaining money under false pretences but they keep better company. They sleep on Simmons beds and preserve their own health through electric refrigeration.

Other types of health hazards are equally difficult to combat although of a different order. The sincere but misguided cranks are perplexing thorns in the sides of clear thinking persons. Self interest does not obviously guide them, for they think that they are performing a service in the world. They are immune to argument for their minds are like the restless waters of the sea, or like dough, on which no permanent impression can be made. They are the anti-vaccinationists, the anti-vivisectionists and the rabid misbelievers in rabies. On the whole they do little harm among people of average intelligence, although they are singularly effective in influencing legislative action.

The saddest part of our story comes when we consider the physicians who advise against vaccination because "they do not believe in it," who are distrustful of immunization against diphtheria because they are ignorant of it; who do not believe in the infection of man with bovine tuberculosis, and who are against pasteurization of milk for no good reason at all. When they closed their last book in medical school, some twenty or thirty or forty years ago, they closed their minds as well, and have not opened them since. New ideas may knock forlornly at the door, but they cannot gain admittance.

I know of a physician in a town of Massachusetts who is on the staff of the local hospital and milk inspector as well. Pasteurized milk is sold in the town, but not in the hospital. The milk inspector "does not believe in it." He must have read, or have been told, of the epidemic at Lee but it has made no impression on the tablets of his mind. That sort of thing, he probably believes, cannot happen in his town; perhaps because he is milk inspector.

The physicians of Massachusetts, if they have a will to do so, can create such a public opinion that raw milk will not have a market in this State. When they realize that their profession is no longer one of pill peddling and throat gazing only, they will do so. They must realize that the private practice of medicine must become the private practice of preventive medicine and they must become unofficial health officers. Those who fail to catch the train of progress will be left upon the tracks of desuetude. I should like to challenge anyone to present a fair argument against the universal pasteurization of milk in Massachusetts.

A few milk producers have already presented their arguments, and they are puny ones. Some have already claimed that their milk cannot carry the streptococcus because, forsooth, their cows are tuberculin tested. More damaging evidence of ignorance or inept selfishness could not well be raised against them.

Certified milk, which is raw, would either require a special dispensation or would have to go by the board. Very well, let it go in the interests of public health. Continue to produce a super-excellent milk, if you will, under the supervision of a commission, and then pasteurize it. It would be a better milk, and safer and worth all that it could be sold for.

## THE BOSTON MEDICAL LIBRARY

### EARLY MEDICAL WORTHIES IN AMERICA

One thing that impressed the reader of such bibliographical sketches of Colonial physicians as there are extant is the deeply religious convictions possessed by so many of the profession of those days. They naturally might be expected to have been so, coming as they did for the most part from stock distinguished for its piety. Besides that, Science had not diverted men's minds from religious contemplation to the extent it later did. Furthermore they were two hundred years nearer the period when religion and medicine were closely allied. Whatever one may feel as to the reconcilability of Science and Religion one can but recognize the fact that, other things being equal, the man with deep spiritual convictions is in a better position to manage patients than he who disclaims any belief in such matters. The stronger the character the better the doctor, might very well stand as an aphorism concerning the medical profession.

Michael Pupin, Professor of Physics at Columbia, has recently published a book, "The New Reformation", the perusal of which is well worth while by every physician for there is that in it which will help to ground those beliefs which are dormant, at least in the subconsciousness of most men, though sometimes submerged by intellectual doubts. We need the help of some one with a clarified vision who has worked with the tools of Science but has been able to keep faith and give cogent reasons for his ability to do so. It may be that a revival of the old time piety and reverence for the things of the spirit might be a wholesome corrective for certain of these baser characteristics which crop out at various times among practitioners of medicine causing us to wonder why so good a man should depart so far from the paths of rectitude.

#### DR. BENJAMIN RUSH

#### 1745-1813

Benjamin Rush was born on December 24th, 1745 on a plantation about fourteen miles from Philadelphia, to which place his immediate ancestors had immigrated from England soon after the first settlement in the 17th century. When he was eight or nine years of age he came under the influence of the Reverend Samuel Finley who conducted a school in Nottingham, Maryland. Later Finley became one of the Presidents of Princeton University. In this quiet country life and among a very religious people he was brought up at a most impressionable period of his youth. During these years he devoted most of his time to classical studies. In 1759 he was entered at Princeton. He obtained the degree of A.B. after one year's study, viz. in 1760, when he was barely fifteen years of age. During the next six years he pursued the study of medicine under the tutelage of Dr. Redmon. He was one of ten students who constituted the first class to study anatomy in this country, in a college course given by Dr. Shippen, at the University of Pennsylvania. After finishing his apprenticeship with Dr. Redmon he went, in 1766, to Edinburgh where he was given his Doctor's degree in 1768. He spent a few months in London and Paris after graduating from Edinburgh, returning to Philadelphia in the fall of 1768. In 1769 he joined Drs. Shippen, Morgan, Kuhn and Bond on the faculty of the recently founded College of Philadelphia, where he was made Professor of Chemistry. Two years later when the College became a part of Pennsylvania University he was chosen Professor of the Institutes and Practice of Medicine and of Clinical Practice.

From the time of this first appointment he was a public teacher for forty-four years. All of his life he had a good many private pupils and it is estimated that he taught close to twenty-five hundred pupils during his long career. At the time he began his teaching, diseases were dealt with as orders, classes general and species, just as botanists dealt with plants. In one of the standard treatises of the time, Cullen's, there were 1387 diseases each with its supposedly appropriate treatment. His contribution to the teaching of medicine was to change all this, so that any disease was studied for its effect upon the system; either it depleted or it stimulated. Having determined to which of these two classes it belonged he selected the treatment that would best counteract whichever tendency it had. In this way he simplified classification and the Pharmacopeia. Naturally he became an advocate of bleeding as a means of depletion. He was a very close student of the pulse and was reputed to know more about it and what it indicated than any one up to his time. His ideas on fevers are, to us of the present day, fantastic and inasmuch as this theory of blood letting was based to a large extent upon his theory as to the cause of fevers his championship of that method of treatment has necessarily undergone considerable modification. In spite of his vigorous championship of what he believed to be sound in doctrine he was open-minded and courted the freest discussion and criticism. He was always ready to be convinced of his error.

In 1739 he passed through an epidemic of yellow fever, by reason of which more than four thousand lives were lost in Philadelphia alone. His willingness to discard what had proved itself ineffective and his well-trained powers of observation enabled him to adopt measures, the essential feature of which was purgation. This seemed to materially aid in bringing the epidemic to an end. He nearly lost his own life however as a result of his superhuman efforts in behalf of the sufferers. He was an indefatigable worker; to

him there was the possibility of learning something from every human contact and every experience, new or old. He entertained the same view about the acquisition of information by the mind as he did about his medical system for he is quoted as having said that "ideas, whether acquired from books or by reflection produce a plethora in the mind, which can only be relieved by depletion from the pen or the tongue." Acting on this principle he wrote a great deal for a man in active practice. A list of sixty-four papers is given in Dr. James Thacher's "Memoir of Dr. Rush" and these were only the ones published during his lifetime. Beside the activities of all kinds which especially pertain to the career of a physician he extended his interest as well as his influence into many other fields. So important were his efforts in these outside affairs that his fellow citizens honored him with positions of trust and responsibility. Often his pen was active in promoting some cause not in any way related to his profession and the number of his spoken addresses was not inconsiderable. He was a member of the Congress at whose sitting the Constitution of the United States was adopted. It was due to his efforts that Dickenson College was established in Carlisle, Pennsylvania, and on all occasions he strongly supported and advocated public education. The establishment of a Republican form of government meant to him, more than anything else, the very thing that Mr. Hoover seems to have conceived as the goal of that type of Government, viz.: a form under which "individualism" might attain its highest development. This he frequently stressed in his writings and public addresses. President Adams appointed him as Treasurer of the United States Mint, which position he occupied for fourteen years. He was the founder of the Philadelphia Dispensary, which was the prototype of similar charitable medical institutions in many other cities, e. g., in Boston, New York, Baltimore and Charleston. His religious faith, piety and reverence for sacred things found frequent exemplification in his many-sided life and left a deep impression upon all with whom he came in contact. He was a Vice-President of the Philadelphia Bible Society and active in the promotion of its objects. During the latter years of his life one of the studies he was carrying on was upon the medicine of the Bible. It was always his custom to have some topic on hand upon which he was gathering information, later to put into shape for his own edification and that of others. Few characters in our medical annals supply so much food for thought to those who are seriously interested in their own professional work and desirous of making the most of the capabilities of which they are possessed.

## MISCELLANY

### HOSPITAL CHARGES REGARDED AS NOT EXCESSIVE

A recent survey conducted by the Federal Bureau of Labor Statistics of the Department of Labor has shown that although the cost of hospital care has risen since 1913 this increase is not in proportion to the growing cost of operation nor equal to the cost of other public services.

Although there seems to be a general impression that hospitals are maintained at unreasonably high costs a careful examination of the facts indicates economy and efficiency on the part of those in charge of these institutions.

John A. McNamarry in an article, the Modern Hospital, June 28, presents figures and arguments which are instructive.

It is estimated that ten million people of the United States pass through the hospital every year. The average hospital cost is estimated to be $300. including the fees for the physician and nurse. This requires an average item of $100. per year in the family budget.

It has been shown that the average per capita cost per day in four representative hospitals in one city in the Middle West was $2.83 in 1913 and that in 1926 it had increased to $6.65. The cost for service had increased 135 per cent. while the charges had increased on the average of 66 per cent. A study of several hospitals in Pennsylvania confirmed the facts first noted.

Other forms of public service such as public schools, health and sanitary departments have shown much greater comparative costs.

There is an offset in the increased cost of hospital service as shown by a shorter average stay in hospitals at the present time as compared with that recorded several years ago.

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### DEATH OF OFFICE WORKERS

Statistics compiled by the Metropolitan Life Insurance Company show that tuberculosis of the lungs is the most important single cause of death among men and women employed in clerical occupations although the rate is somewhat lower than it was eleven years ago.

Following pulmonary tuberculosis, heart disease, influenza, pneumonia, Bright's disease and accidental violence follow in the order given. As regards morbidity among office employees of the Company there was found to be more frequent sickness among women than men, but when men are sick the period of disability is longer. The most important cause of disability was the acute respiratory diseases.

It is believed that more attention given to improving ventilation, illumination, bad seating, bad habits, and fashion will do much to improve the conditions of office workers.

It is evident that the time and efficiency lost through disease impose an unnecessary burden on the employers of office forces.

## TUBERCULOSIS ABSTRACTS

### A Review for Physicians

*Issued Monthly by the National Tuberculosis Association*

Treating a case of tuberculosis requires science and art. The tuberculosis patient is sick physically and psychically. "Treat the patient—not only the disease" is more than empty play on words. In no disease is recovery more dependent on the intelligence and co-öperation of the patient than in tuberculosis. Expert management of the pathological condition is not enough; the patient must also be taught and trained and encouraged to adjust himself to his handicap. Unless doctor and patient are sympathetically in accord, this cannot be achieved.

SIR WILLIAM OSLER SAID:

"There is no greater mistake than to keep from the patient the knowledge that he has tuberculosis in its early stages, as it is only by having that knowledge that he can be expected to recover. We are criminal participants if we refuse to tell the patient exactly the nature of the trouble."

SAFETY IN KNOWLEDGE

Patients may recover without even knowing they are tuberculous; but it is far better that a tuberculous person study the disease in order that he may recover more rapidly and that he may avoid a future breakdown. Knowledge of the disease gives one a feeling of safety, and safety means happiness. A person who has been tuberculous and is well informed on the subject is not often worried about his future. He knows how to avoid trouble, he feels safe, and, as a consequence, is more likely to live a normal and happy life. Patients, taking a rest cure, should learn tuberculosis, learn it well! Traveling about in the dark is an unsafe way to get through life.

Persons with supposedly imaginary troubles are commonly advised to "forget it." Such advice is dangerous. The great evil resulting from the indiscriminate use of the expression—forget it—is that the patient often has at the time not only a serious but actually a fatal disease that the doctor has not discovered.

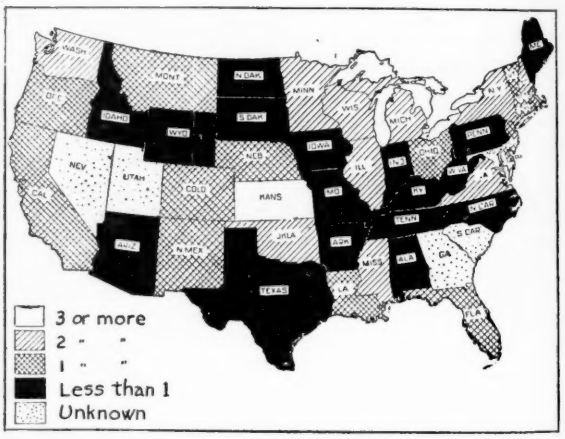
After a tuberculous patient has taken a rest cure and has gone back to work, his mind begins to build up a barrier to exclude the disagreeable parts of his recent experience. This is normal. Only morbid minds and chronic sympathy seekers continue to dwell on hardships, past or present. The healthy mind forgets disagreeable experiences. For this reason, persons that have been tuberculous often wilfully deny the fact after recovery from the disease. It is commendable self-deception. But they do follow the straight and narrow path, and, should evidence of what they think may be active disease reappear in them, they go at once to their medical attendant for another examination.—*Getting Well and Staying Well, John Potts, C. V. Mosby Co.*

INSTRUCTING THE PATIENT

The ultimate result in pulmonary tuberculosis depends directly on the patient's application of the knowledge he has acquired about what he should and should not do. Education of the tuberculous patient closely resembles psycho-therapy. In a preliminary talk, Brown tells the patient a few fundamental principles. He describes the pathology, using homely similes comparing the newly formed scar tissue, for example, to a delicate spider web which may easily be stretched or broken by the patient's indiscretion and so permit tubercle bacilli to migrate to new areas of the lung. He does not peremptorily order the patient to bed but puts the whole problem before him so that the patient himself elects to go to bed. While in this state of mind, the patient is receptive to all sensible suggestions. The rôle played by rest, fresh air and nutrition is then explained to him. At each visit, he is given additional information. Questions are jotted down when they occur to him and are discussed with the doctor at the next visit. The care needed to recover and to prevent future breakdown becomes a part of the patient's subconsciousness.

Mention of complications is taboo until they actually occur. Physical findings are not discussed with the patient except that certain sounds heard in the chest are called "green lights," meaning "go slow," or "red lights," meaning "lay off in the side track for a while." Occupational therapy (when bed rest is no longer required) is a God-send. Idle patients are tempted to do foolish things.

After the training in the sanatorium or by a private physician, the patient passes on into the university of life, there to solve his own problems with the aid of occasional advice from his physician.—*Instructing the Tuberculosis Patient to Assure Permanency of Recovery, Lawrason Brown, Jour. of the Out. Life*, March, 1928.




Ratio of cases of tuberculosis reported to deaths from tuberculosis, according to states. Compiled by Dr. Robt. E. Plunkett, N. Y. Dept. of Health.

## FEEBLE-MINDED AND EPILEPTICS IN MAINE STATE INSTITUTIONS: 1927

### Preliminary Report

Washington, D. C., August 1, 1928.—The Department of Commerce makes the following announcement for the State of Maine concerning results of the 1927 census of feeble-minded and epileptics in state institutions.

The Pownal State School had a total of 43 first admissions during the year 1927, as compared with 71 in 1926, and 104 in 1922. The ratio of first admissions per 100,000 of population was 5.4 in 1927, as against 13.4 in 1922.

These first admissions represent patients received

during the year, who had not previously been under treatment in any institution for feeble-minded and epileptics. Such newly admitted patients afford the best available measure of the number of new cases which are brought under institutional care during the year.

The extent to which provision has been made for the state institutional care of feeble-minded and epileptics is perhaps best indicated by the number of patients in the institutions on a given date. The number of patients present in the Pownal State School on Jan. 1, 1928, was 683 as compared with 62 on Jan. 1, 1910; and the ratio of such patients per 100,000 of general population, increased steadily from 8.4 on Jan. 1, 1910, to 86 on Jan. 1, 1928.

Of the first admissions in Maine during the year 1927, 20 were males, and 23 were females; and of the patients present on Jan. 1, 1928, 348 were males, and 335 were females.

Those figures are based on reports furnished by the institution, with the co-operation of the State Board of Charities and Corrections. The figures for 1927 and 1928 are preliminary and subject to correction.—*Department of Commerce, Washington.*

| Year | First admissions during the year | | Patients present January 1 | |
|---|---|---|---|---|
| | Number | Per 100,000 of general population* | Number | Per 100,000 of general population# |
| 1928 | ... | .... | 683 | 86.0 |
| 1927 | 43 | 5.4 | 669 | 84.6 |
| 1926 | 71 | 9.0 | 640 | 81.2 |
| 1923 | ... | .... | 467 | 60.0 |
| 1922 | 104 | 13.4 | 377 | 48.6 |
| 1910 | ... | .... | 62 | 8.4 |

* Based on estimated population July 1.
\# Based on estimated population January 1, 1928, 1927, 1926, 1923, and 1922; and enumerated population April 15, 1910.

## THE INCIDENCE OF VARIOUS DISEASES AT DIFFERENT AGES

Until recently the best index of the incidence or prevalence of most diseases has been the number of deaths, according to Surgeon General H. S. Cumming of the U. S. Public Health Service. Since the fatality of different diseases varies greatly, death records can not indicate very accurately the number of cases that actually occur. There has been a need for complete records of actual disease prevalence in the general population which has been long recognized by public health workers and students. While this need was being met to some extent by occasional records of sickness among school children and employed workers, the available information did not cover the entire life span nor did it include persons not at work or at school.

In an attempt to supply these needed data, the U. S. Public Health Service undertook a continuous survey of a general population group in Hagerstown, Maryland. Records were made of all the illnesses which occurred among persons of different ages and of both sexes, and the cause was ascertained for each illness in so far as possible. The practicing physicians of that locality coöperated in ascertaining the cause of illness.

The results of this study in so far as they relate to the incidence of various diseases according to age have just been published by the U. S. Public Health Service, and constitute a volume of material which is more complete and detailed than that of any other study so far published in this country or abroad. The population group studied included about 8,000 persons, and it was canvassed continuously by experienced field assistants for nearly two and a half years. Since this group was fairly representative of a typical small city in the middle eastern part of the United States, the statistics obtained afford a probably fair sample of the general population in this section.

The results of this study are given in numerous detailed tables and charts.—*United States Public Health Service.*

## INVESTIGATION OF YELLOW FEVER IN AFRICA

The ministry of Health of Great Britain and the Yellow Fever Commission of the Rockefeller Foundation have united in an intensive effort to discover the endemic center of yellow fever in Africa.

The great difficulty is found in the fact that visible epidemics of the disease do not occur unless there is a constant stream of non-immune investigation. The disease dies out in communities with stationary populations because the living remainder of groups of people constantly exposed to the disease gradually become immune, hence the endemic center may not be found in native populations.

In the study of susceptible animals it has been found that guinea pigs, and monkeys and chimpanzees in West Africa are immune, but macaque monkeys imported from India are susceptible.

It is now believed that the African disease is identical with that found in other parts of the world.

## CHANGES AT VANDERBILT UNIVERSITY

Following the resignation of G. Canby Robinson from the faculty, Dr. C. Sidney Burwell has been made professor of medicine at Vanderbilt University, and physician-in-chief of the hospital. Dr. W. S. Leathers, professor of preventive medicine, has been elected dean of the school; Dr. Hugh Morgan has been promoted from an associate professorship to a professorship of clinical medicine, and Dr. Horton Casparis has been made professor of pediatrics and head of the department.

## RALEIGH-FITKIN MEMORIAL FUND

Yale University, according to *Science*, is the recipient of a gift of $1,000,000 made by A. E. Fitkin, of New York City, in memory of his son. Under the terms of the gift the Raleigh-Fitkin memorial pavilion will be erected and dedicated to the care of children. The remainder of the fund will be used as a permanent endowment. The whole fund being devoted to the study of children's diseases from the standpoint of curative and preventive medicine.

## SUSPENSION OF THE REGISTRATION OF DR. WALDO B. JONES

At a recent meeting of the Board of Registration in Medicine the registration of Dr. Waldo B. Jones was suspended for three months dating from August second, for violation of the Massachusetts liquor law.

## PUBLIC HEALTH IN FLOODED AREA OF MISSISSIPPI VALLEY

Approximately one year has elapsed since the frightful disaster of the flood in the Mississippi Valley. The United States Public Health Service, states that some comfort may be obtained in the knowledge that better communities are being builded on the ruins of those destroyed, and as a rule, a better public health regime has been inaugurated. Following the flood of waters there has developed another flood —a flood of sanitation development, which has placed that area many years ahead of the old program in connection with the development of full-time county health service. Since July, 1927, 78 counties have joined the roll of those that are enjoying adequate public health protection through the labors of over 300 full-time health workers. This is a distinct step forward, and a stimulus to perpetuate these endeavors.

If the work continues as it has to date, the Mississippi Valley will soon enjoy the universal public health protection it deserves.

This should serve as a splendid example to other communities and stimulate them to strengthen their local health departments and secure adequate full-time health service.—*Bulletin United States Public Health Service.*

## ECONOMICS AND MEDICINE

A doctor once was asked:

"On what are your charges based?"

He answered: "There are no economics in a doctor's fees. They are a mixture of factors, the gravity of the operation, the difficulty of the task, its success or failure, the patient's financial status—these and other things play a part."

But if a doctor's fees are not based on sound economics, there are tremendous economic factors in the relations of his profession to the community.

At a recent session of the Congress of American Physicians and Surgeons it was declared that deaths from heart disease cost the country $1,500,000,000 a year and that the care of such cases cost another $100,000,000. How the learned doctors reached these figures we do not know but we accept them contentedly, pausing only to note that that totals more than the wholesale value of electrical machinery made in 1925, according to the census of manufactures.

We pick out electrical machinery because Dr. Paul D. White of the Massachusetts General Hospital blames the automobile and the telephone and like accessories of modern life for the increase in heart disease and exonerates alcohol, tobacco, coffee and most athletics. So when the same newspaper tells us that we shall use 111 billion cigarettes in 1928 as against 97 billion in 1927, we breathe easier.—*Nation's Business* for July, 1928.

## ILLNESS AS RELATED TO SEX

A recent survey made by the United States Public Health Service seems to indicate that woman, despite her longer average of life, is ill more frequently than is man. While each chief period of life is characterized by certain illnesses, respiratory diseases accounted for over half the illness at every age. The increased incidence of illness in the female sex began soon after adolescence, the types of illness from which women suffer more than men being chiefly the common types of respiratory diseases, digestive and nervous disorders and diseases of the circulation.

At every age the frequency of accidents is greater among males than females.

## FIRST AID METHODS FOR TREATING THE INJURED

Surgeon General H. S. Cumming of the United States Public Health Service has issued a concise statement of the approved first aid care of injured persons. This publication is issued because there are more than 80,000 persons killed and over 2,000,000 additional seriously injured by accidents in the United States.

Physicians may very properly secure copies and distribute them to their patients or advise the laity to apply for them. A copy should be in every home.

## RISE IN NUMBER OF PNEUMONIA DEATHS

Deaths from influenza and pneumonia and the prevalence of smallpox continued to be higher for 1928 than for 1927, according to the weekly review of the Public Health Service, published on June 29. Ninety-three cities with an estimated population of 31,000,000, reported 848 deaths from influenza and pneumonia for the week ending June 9, as against 577 for the corresponding week of 1927.

## PATIENTS UNDER THE CARE OF THE VETERANS BUREAU

The persons now under treatment of the Veterans Bureau were reported on June 1928 to have been 26,384 which is an increase of 692 during the past year. The cases of the more important diseases were as follows: tuberculosis 6,718, neuropsychiatric 13,099 and general medical and surgical 6,567.

Extension of accomodations for the veterans is underway.

## DR. W. L. MOSS WILL GO WITH THE CRANE EXPEDITION

Contributions to medical science, as well as the obtaining of zoölogical collections and information, are expected to result from the Crane Pacific Expedition of Field Museum, it was announced recently by Stephen C. Simms, director of Field Museum of Natural History.

Plans for studies of tropical diseases and their cure, and also for medical investigations bearing on

the blood groups in man, have been drawn up by Dr. W. L. Moss, who is to sail with the museum party on its year's voyage circumnavigating the Pacific Ocean, as physician of the expedition. Dr. Moss is a professor of medicine at Harvard University Medical School. While his primary function on the voyage will be that of medical adviser to the expedition personnel, he will have unusual opportunities to study tropical diseases in the many islands of the South Pacific and western Pacific included on the expedition's itinerary, and to make his other investigations.

Dr. Moss has done considerable work on the blood groups in man during the early development of this problem, and he established the classification which is now in use.

"It is accepted that the characteristics on which the blood groups are based are hereditary characteristics, and are transmitted according to the Mendelian laws," wrote Dr. Moss in outlining his plans to Director Simms. "The attempt has been made to use these characteristics in the study of race relationships. I have been collaborating during the past year in an anthropological study of the Mayas of Yucatan, and the Mexicans. This expedition promises an unusual opportunity for carrying on this work, and may make possible a more comprehensive study of relationships than has thus far been made."

The Crane expedition is to be headed by Cornelius Crane of Chicago and Ipswich, Mass., and will sail about October 15 from Boston on Mr. Crane's yacht, the "Illyria." Its principal work in the collection of rare zoölogical specimens for Field Museum will be done in the South Sea islands, the East Indies, and eastern Asia.

## WEEKLY HEALTH INDEX

Telegraphic returns from 68 cities with a total population of thirty million for the week ending August 4 indicate a mortality rate of 10.8 as against 10.4 for the corresponding week of last year. The highest rate (22.3) appears for Nashville, Tenn., and the lowest (6.0) for Yonkers, N. Y. The highest infant mortality rate (189) appears for Nashville, Tenn., and the lowest for Bridgeport, Conn., Cambridge, Mass., and Lynn, Mass., which reported no infant mortality.

The annual rate for 68 cities is 13.5 for the thirty-one weeks of 1928, as against a rate of 12.8 for the corresponding weeks of 1927.—*U. S. Department of Commerce.*

## EPIDEMIC CEREBRO SPINAL MENINGITIS IN NEW YORK CITY

The New York City Department of Health reports a sharp increase in the prevalence of cerebro spinal meningitis as shown by 385 cases thus far reported in 1928. The untreated cases show a mortality of 80 per cent. Serum treatment if undertaken promptly reduces the rate to about one-third or possibly one-half of this figure. In order to secure the benefits of early treatment, the Department of Health will on request by the attending physician do a lumbar puncture for diagnosis and at the time of the tap anti-meningococcus serum is injected in suspicious cases and when the case is found to be positive subsequent injections will be made as indicated or requested.

## CAUSES OF SICKNESS AMONG MALES AND FEMALES AT DIFFERENT AGES

That the human female is more often sick than the male, in spite of her longer average duration of life, is one of the apparent anomalies shown by available sickness records for adult persons and by mortality records.

The U. S. Public Health Service recently undertook to inquire a little more closely into this excess of the sickness rate among females, and kept under observation a general population group composed of about 8,000 white persons of all ages and both sexes for a period of nearly two and a half years in a typical small city in the middle eastern section of the United States. Records of the kinds and causes of sickness were collected, with the result that for the first time there is available information relating to sex differences in the incidence of various diseases at different ages in persons composing a general population group. The results of the study have just been published by the U. S. Public Health Service.

It was found that the higher female sickness rate did not hold true for children under 10 years of age. Boy babies and small boys were apparently more subject to infectious diseases and to diseases of the eyes and ears, skin, to colds and other respiratory conditions, and to digestive troubles, than were girls of the same age. But as soon as the adolescent period of life began, the sickness rate of the girls became higher than that of boys and the female rate for practically all diseases was actually higher than that of the males throughout adult life. Women suffer more than men from sicknesses due to the common types of respiratory diseases, to digestive and nervous disorders, and to diseases and conditions of the kidneys and heart. This in spite of the fact that the death rate among older women is lower than that of older men.

There were some exceptions to this general rule for persons over 10 years of age. One was that the frequency of accidents was greater among males than among females at every age of life. The proverbial greater adventuresomeness of boys was shown by the fact that in the age period 5 to 9 years the frequency of accidents of all kinds among boys was much greater than that among girls of the same age; but in adolescent ages, the sex difference in this cause diminished considerably, although the accident rate of girls never exceeded that of boys.

The findings of this study corroborate the results of other studies on adults at work, which have been conducted by the Public Health Service in co-öperation with certain industrial establishments, and are in accordance with the records of absences among school children due to sickness that have been collected over a period of years.—*United States Public Health Service.*

## U. S. DEPARTMENT OF LABOR, CHILDREN'S BUREAU, WASHINGTON

Reports that almost half of a typical group of nearly 4,700 children of 12 years or over in certain representative schools for the deaf were reported as born deaf, and four-fifths were deaf before their fifth year, according to the National Research Council's report of its survey of schools for the deaf. Meningitis, scarlet fever, measles, falls and blows, and whooping cough are given as the chief causes of deafness which is not congenital.

Also that the United States Bureau of the Census announces a provisional infant mortality rate for 1927 for the birth-registration area (excepting three States for which figures are not yet complete) of 64 per 1,000 live births. The lowest rate previously reported is 71 for 1924.

### STUDIES OF VISION IN SCHOOL CHILDREN

The United States Public Health Service has recently announced the results of studies conducted of vision of school children. Nearly 2,000 children were carefully examined by a physician specially trained in defects and diseases of the eye. These children were not a selected group and, therefore, the results may well be considered as representing conditions in the general school population of the country.

The number of children in the group studied who actually needed glasses for school work was 45 per cent. of those examined. The Surgeon General emphasizes the importance of making visual tests of school children at least twice a year, because nearsightedness may progress rapidly within a year. The nearsighted eye may practically always be discovered by the use of the simple Snollen chart. Far sightedness is not always discovered with this test.

These studies show that while 60 per cent. of the children may read normally on the vision test chart, 32 per cent. of these are definitely farsighted and are constantly straining the eyes in near work. This was shown by using "drops" in the eye which temporarily removed the power of optical adjustment. The fact that the eyes of children should always be examined by a physician who is an eye specialist and is competent to make a thorough examination, is also pointed out. If a thorough examination had been made of the vision and proper steps taken for the correction of defects instead of waiting for symptoms to develop, it is probable that many persons who are wearing glasses today would not have to do so.—*United States Public Health Service.*

### BIRTH AND DEATH RATES

Washington, D. C.—The Department of Commerce announces that birth rates for 1927 were lower than for 1926 in 23 of the 33 States for which figures for the two years are reported. The highest 1927 birth rate (28.8 per 1,000 population) is shown for North Carolina and the lowest (13.6) is for Montana.

Death rates for 1927 were lower than for 1926 in 28 of the 33 States shown for both years. The highest 1927 death rate (13.9 per 1,000 population) is shown for Vermont and the lowest (7.1) for Idaho.

Infant mortality rates for 1927 were lower than for 1926 in 30 of the 33 States shown for both years. For States the highest 1927 infant mortality rate (125.8) appears for Arizona and the lowest (47.5) for Oregon.

Massachusetts statistics not yet reported.

| Area | Number--1927 | | | Rate per 1,000 estimated population | | | | Infant mortality (deaths under 1 year per 1,000 births) | |
|---|---|---|---|---|---|---|---|---|---|
| | Births | Deaths | | Births | | Deaths | | | |
| | | All ages | Under 1 year | 1927 | 1926 | 1927 | 1926 | 1927 | 1926 |
| Maine | 16,300 | 10,879 | 1,305 | 20.6 | 20.8 | 13.7 | 14.4 | 80.1 | 80.0 |
| Conn. | 28,859 | 16,755 | 1,702 | 17.6 | 18.2 | 10.2 | 11.4 | 59.0 | 72.1 |
| R. I. | 13,726 | 7,899 | 912 | 19.5 | 19.6 | 11.2 | 12.7 | 66.4 | 82.0 |

## CORRESPONDENCE

### AMERICAN MEDICAL ASSOCIATION

COUNCIL ON PHARMACY AND CHEMISTRY

ARTICLES ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY

*Managing Editor*, THE NEW ENGLAND JOURNAL OF MEDICINE:

In addition to the articles enumerated in our letter of July 27th, the following have been accepted:

Abbott Laboratories

Potassium Bismuth Tartrate with Butyn—D.R.L., 20cc.

Parke, Davis & Co.

Scarlet Fever Streptococcus Toxin for Skin Test—P. D. & Co.

E. R. Squibb & Sons

Ephedrine Hydrochloride—Squibb.

Swan-Myers Co.

Syrup Ephedrine Hydrochloride—Swan-Myers.

Yours truly,

W. A. PUCKNER, *Secretary*,

Council on Pharmacy and Chemistry.

### OVER 17 YEARS BETWEEN APPENDIX ABSCESS AND APPENDICECTOMY

*To the Editor:*

In connection with the very valuable article by Drs. Homans and Powers, on appendiceal abscess with treatment of the appendix, in your issue of August 16th, a case which I had several years ago may prove of interest as showing the possibilities of the lapse of a long time between the opening of the abscess and removal of the appendix.

April 28, 1906, Mr. G. O. D., aged 29, was seen at his residence; he had been sick for three weeks; there had been a lump in his right side for about two weeks; he had been running a temperature of 101° to 104°; had been very much worse for the last few days. I found him in very bad shape with a remarkably large abscess. Percussion of the mass indicated the presence of gas in addition to pus. The abscess was opened by a short incision with the escape of a large amount of gas, followed by offensive pus; in the midst of the pus was a piece of tissue which looked as though it might be a rotten appendix. The abscess was so large that the finger introduced could not reach its walls. The cavity was

cleansed, drainage introduced and the incision left wide open, with the statement to the friends that there would probably result a hernia. The operation was made at the patient's residence as he was too sick for transportation.

The patient made a smooth recovery. A small hernia followed, but not such as to require any operative procedures.

December 3rd, 1923, more than seventeen and a half years later and without any intercurrent trouble, the patient was brought to the hospital having been seized with an acute attack of appendicitis at 2 A. M. the day before. When he reached the hospital his condition was typical of acute appendicitis, and I operated upon him immediately, making the usual right rectus incision. Found extensive ancient adhesions which were separated, and finally brought up from back of the cecum an acutely inflamed appendix. It was sharply angulated at its middle, the distal end much swollen. It was removed in the usual way with prompt recovery. Before completing the operation I opened the old scar so as to take care of the hernial protrusion.

I have reported this case to a good many surgical friends, but so far have never found one who had had anything like such a long interval between the original abscess and the removal of the appendix. It seems very evident that an appendix which is left behind can never be looked upon as entirely free of danger.

J. F. Baldwin, M.D.

Columbus, Ohio.
August 21, 1928.

## THE TREATMENT OF ABORTION

*To the Editor:*

In your Journal of Nov. 24, 1927, p. 1006, under "Abortion" treatment is directed toward surgical removal (in clean cases) under anesthesia, etc. In a "query" answer the *A. M. A. Journal* (1896 or 7) under "Pituitary in Abortion" says excellent results are obtained by giving the patient 0.2 gm. of quinine by mouth every hour for 5 doses, and then 0.5 c.c. of sol. pituitary U. S. P. by hypo every 2 hours thereafter. Usually, the retained tissue is spilled after the first or second hypo" (advised for clean cases and especially in febrile abortions.) Out in the country, away from hospital aid, lacking adequate surgical aid and nursing, the handling of abortions is a serious matter. Do you know if any of the members of your Society have tried this method? I understand the article in your Journal was the general method current among the members.

W. C. O'Neal.

Palmyra, Mo.

Answer—The treatment of abortion as given in the Journal, November 24th, 1927, page 1006, covers the modern treatment of this condition, describes the method of cleaning out the uterus in the more afebrile and emphasizes the conservative treatment in the febrile case. There is nothing to add to that method of treatment. In regard to the treatment of abortion by giving the patient 0.2 gm. of quinine by mouth every hour for five doses, and then 0.5 c.c. of sol. pituitary U. S. P. by hypo. every 2 hours thereafter, it might be said that this method is adequate in the cases in which it works, but frequently it fails, and we are then left in the presence of a patient who is bleeding from retained products. Even in the average country home, the aseptic treatment of abortion, as given in the Journal, may be easily carried out. A kitchen table may always be found on which the patient may be placed. Her legs may be held in position by means of a sheet, which passes over the shoulders and is tied below each knee. The patient is prepared as directed with 3½% tincture of iodine after shaving the genitals. In the absence of dry sterile goods, four ordinary towels may be boiled, together with a pair of rubber gloves and the instruments. These towels are rung out and are placed around the field of operation, thus giving a surgically clean field. The operator scrubs and puts on sterile rubber gloves. His instruments are left in the sterilizer and are picked out of that container when needed, so that even with this form of preparation no break in the technique may occur. The patient in the country, therefore, may receive proper treatment for an abortion under perfectly aseptic conditions, with, of course, a little more trouble for the physician attending her, than would be encountered in a well equipped hospital.

## RECENT DEATHS

**ROBIE**—Dr. Walter Franklin Robie, neuropsychiatrist, of Baldwinsville, died suddenly of cerebral hemorrhage while bathing, at his summer home on Lake Dennison, Winchendon, August 29, 1928, at the age of 61.

He was born at Bradford, Vt., October 22, 1866, was educated at Dartmouth College, where he was graduated in 1889, with the degree of A.B. His M.D. was from Dartmouth in 1893. He studied neurology and settled in Baldwinsville in 1898, joining the state medical society in that year and becoming a member of the staff of the Baldwinsville Hospital cottages for children. Of late years he was in charge of a private sanatorium called the Pine Terrace Sanatorium. Dr. Robie served in the World War and at the time of his death held the rank of major in the Reserve Corps. He is survived by his widow and six children.

**EVANS**—Dr. David James Evans, a former practitioner of Montreal, a graduate of McGill University, Faculty of Medicine, in 1890, died at his summer home in Dover, Mass., of heart disease, September 1, 1928, at the age of sixty. He had been a resident of Boston for several years.

**WINSLOW**—George Frederick Winslow, Rear Admiral, United States Navy, in the Medical Corps, retired, died at his home in New Bedford, September 3, 1928, at the age of 86.

He was a native of New Bedford, where he was born May 8, 1842. His M.D. was received from Harvard Medical School in 1864, although he had been in active service in the Navy for two years as military surgeon. During the war Dr. Winslow had a most distinguished record and in 1868 was on board the U. S. S. *Wateree* when she was carried a quarter of a mile inland by a tidal wave at Arica, Peru, the *Wateree* being the only ship in the harbor which was not destroyed. He was a member of the Military

Order of the Loyal Legion and of the old Dartmouth Historical Society. Two sons and a daughter survive him.

### THE DEATH OF LADY OSLER

News of the death of Lady Osler on August 31st, 1928, at her home in Oxford, England, in her seventy-fifth year, will be received in this country with great regret by her many friends in the medical profession. She will be long remembered as the wife of the late Sir William Osler. Born on June 19, 1854, she was the daughter of John Revere of Boston and Canton, Mass., a direct descendant from Paul Revere. Previous to her marriage to Sir William in May, 1892, she had married, in December, 1876, Dr. S. W. Gross, the son of Dr. S. D. Gross of Philadelphia.

She was a most delightful hostess and many physicians will recall with pleasure her hospitality in Philadelphia and later at No. 1 West Franklin Street, Baltimore. She presided also, for many years, over Sir William's busy household at 13 Norham Gardens, Oxford. Since her husband's death, in 1919, she had continued to reside in Oxford, and it was her wish that she live there until the important medical library collected by Sir William was catalogued and sent to Canada. She did not quite live to see the completion of this task, although the catalogue is practically ready and the library due to be moved to McGill University, Montreal, before the end of the year.

Death occurred suddenly from coronary thrombosis, after she had passed a pleasant summer, part of the time in Scotland with her sister, Mrs. Henry B. Chapin of Jamaica Plain, Mass.

## NEWS ITEMS

THE RE-ESTABLISHMENT OF THE *PENNSYLVANIA MEDICAL JOURNAL*—The *Atlantic Medical Journal* will give up its present name and will again become the *Pennsylvania Medical Journal* beginning with the October, 1928, issue. The address will remain 230 State Street, Harrisburg, Pennsylvania. The management and policy will be unchanged. This journal is published by the Medical Society of the State of Pennsylvania. The preliminary notice does not refer to the former association with the Delaware State Society in the publication of the *Atlantic Medical Journal.*

THE ENGLISH BIRTH RATE—For several years the English birth rate has been decreasing. According to returns for the three months ending June 30, 1928, there were 3142 more than in the corresponding quarter of last year.

This is the first gain during a corresponding quarter since 1920.

THE QUALITY OF CANADIAN MILK TO BE STUDIED—The United States Public Health Service has directed Surgeon L. L. Lumsden to go to Montreal, Canada, and to such other points in the surrounding territory as may be necessary for the purpose of ascertaining the provisions for the safeguarding of milk and milk products and in that city and vicinity and report as to whether it is safe to let milk and those products into the United States.

THE WHITE HEALTH UNIT IN CHARLESTOWN—The contractors are starting on the work of erecting the New George Robert White Health Unit located at High, Summer and Elm Streets, Charlestown District.

The cost of this health unit will be $247,000. It will be a three story structure. A solarium will be in the top story.

## NOTICES

### REMOVAL

Dr. Grantley Walder Taylor has removed his office to 264 Beacon Street, Boston, Mass.

### ANNUAL CONVENTION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

Eleven sections will comprise the 57th annual convention of the American Public Health Association, which will be held jointly with the meetings of the American Child Health Association and the American Social Hygiene Association, October 15th to 19th, inclusive, at the Stevens Hotel, Chicago. Sections will be divided into the following main groups: Epidemiology, Public Health Education, Cancer, Vital Statistics, Industrial Hygiene, Public Health Engineering, Child Hygiene, Laboratory, Health Officers, Food Drugs and Nutrition, and Public Health Nursing.

The discussion in each section will be led by an authority in that field. Dr. Edward S. Godfrey, Jr., Director of the Bureau of Communicable Diseases of the State of New York, will direct the section of Epidemiology—one of the most important divisions of the meeting. Dr. Godfrey will be assisted by Dr. Alton Pope, of Chicago, who will present a paper on "Fatality in Meningitis."

Convention discusssion will be followed by laboratory trips, or inspection tours. Eighteen scheduled trips have been planned, and sixty-three optional ones are on the program, so that these tours will offer a wide range of interest and be of value to workers in every phase of health.

Over three thousand delegates and visitors, including physicians from England, Germany, Sweden, Mexico, Canada and the Canal Zone will be in Chicago to attend the meeting, which will open Monday evening, October 15th, with a general session at which Dr. Herman N. Bundesen president of the American Public Health Association will deliver the opening address. A second general session will be held on Wednesday when Dr. Frank B. Boudreau will be present from the Health Section of the League of Nations at Geneva, Switzerland, to speak on "International Health."

### CHANGES OF DUTIES AND STATIONS OF COMMISSIONED AND OTHER OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE IN NEW ENGLAND

Assistant Surgeon G. L. Dunnahoo. Relieved from duty at Ellis Island, N. Y., and assigned to duty at Marine Hospital, Portland, Maine. August 10, 1928.

Surgeon R. E. Porter. Relieved from duty at Glasgow, Scotland, about October 1, 1928, and assigned to duty at Marine Hospital, Boston, Mass.

Assistant Surgeon M. A. Gilmore has been relieved from duty at the Marine Hospital, Portland,

Maine, and assigned to duty at the Marine Hospital, Stapleton, N. Y.

Assistant Surgeon W. C. Braun has been relieved from duty at Stapleton, N. Y., and assigned to duty at the Marine Hospital, Portland, Maine.

Assistant Physical Chemist J. J. Bloomfield. Directed to proceed from New Haven, Conn., to Evanston, Ill., and return, to present paper before Institute of Chemistry at Northwestern University, August 9.

Senior Surgeon J. O. Cobb has been relieved from duty at Boston, Mass., directed to proceed to Stapleton, N. Y., and report to the Chairman of board for examination on August 27, 1928. He has been assigned to duty at Los Angeles, California, in charge of the Relief Station at that place.

Surgeon A. D. Foster. Relieved from duty at Norfolk, Va., and assigned to duty at Boston, Mass., in charge of the Marine Hospital at that place.

### UNITED STATES CIVIL SERVICE EXAMINATIONS

SENIOR MEDICAL OFFICER
MEDICAL OFFICER
ASSOCIATE MEDICAL OFFICER
ASSISTANT MEDICAL OFFICER

Applications will be rated as received by the U. S. Civil Service Commission at Washington, D. C., until December 29, 1928.

The United States Civil Service Commission announces open competitive examinations under the above titles for filling vacancies occurring in the Federal classified civil service throughout the United States, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion.

There is especial need for medical officers qualified in tuberculosis or neuropsychiatry. Announcement will be sent to anyone upon request.

## NOTICES OF MEETINGS

### THE CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

The American College of Surgeons will hold the eighteenth Clinical Congress in Boston, October 8-12. Headquarters will be at the Statler Hotel and meetings will be held in the ballroom of the Copley-Plaza Hotel and Symphony Hall. The Hospital Standardization Conference will be held in morning and afternoon sessions in the ballroom of the Copley-Plaza Hotel Monday, Tuesday, Wednesday, and Thursday. An innovation this year will be the commencement of the clinics in the Boston hospitals on Monday afternoon, continuing through the morning and afternoons of the following four days. Monday evening's program will include an address of welcome by the local Chairman, the address of the retiring President, Dr. George David Stewart, New York, the inaugural address of the new President, Dr. Franklin H. Martin, Chicago, and the John B. Murphy oration on surgery by Professor Vittorio Putti of Bologna, Italy. Tuesday, Wednesday and Thursday evenings' sessions will be held in the ballroom of the Copley-Plaza Hotel. At the Wednesday evening meeting the visiting surgeons will be the guests of the Boston Surgical Society at a special meeting when the Bigelow medal is to be awarded. On Friday evening the Annual Convocation of the College will be held in Symphony Hall when the 1928 class of candidates for Fellowship in the College will be received. The fellowship address on this evening will be delivered by Dr. William J. Mayo. The annual meeting of the Governors and Fellows will be held Friday afternoon and will be followed by a symposium on Traumatic Surgery to be participated in by leaders in industry, labor, indemnity organizations and the medical profession. Ether Day will be celebrated in the Dome Room of the Massachusetts General Hospital on Friday when a bronze bust of William T. A. Morton will be presented to the hospital. It was in this building that ether was first administered for the production of surgical anaesthesia on October 16, 1846. Several newly completed medical motion pictures produced under the supervision of the American College of Surgeons and approved by it will be shown during the Congress. Reduced fares on the railways of the United States and Canada have been authorized to those holding a convention certificate so that the total fare for the round trip will be one and one-half the ordinary first class one-way fare. Other outstanding features will be the exhibits. In addition to the commercial exhibits the departments of the College will present scientific exhibits. A number of distinguished foreign guests of international reputation have signified their intention of attending. The Chairman of the Boston Committee on Arrangements is Dr. Frederic J. Cotton.

### PROGRAM OF THE THIRTY-EIGHTH ANNUAL MEETING OF THE AMERICAN ELECTROTHERAPEUTIC ASSOCIATION, SEPTEMBER 10, 11, 12, 13, 1928

BOSTON—HEADQUARTERS, MEETING AND EXHIBIT ROOMS AT HOTEL STATLER

ALL LEGALLY LICENSED PHYSICIANS ARE WELCOME

MONDAY, SEPTEMBER 10TH, A. M. AND P. M.

*Registration:* At the Hotel Statler from 9 A. M. to 4 P. M.

*Technical Exhibit:* At the Hotel Statler.

*Clinics:* 10 A. M. to 12 noon, Boston City Hospital, service of Frank B. Granger, M.D. Visit to new department of physical therapy and wards.

2 to 4 P. M., Children's Hospital, Nerve Department. Demonstration of treatment of birth palsies.

MONDAY EVENING, SEPTEMBER 10TH

OPENING SESSION, 8 P. M.

1. Correlation of Recent Advances in Science with Clinical Medicine. (Presidential Address.) Charles F. Stokes, M.D., New York.
3. The Philosophy of Physical Therapy. J. C. Elsom, M.D., Madison, Wis.

TUESDAY MORNING SESSION, SEPTEMBER 11TH

*Executive Session:* 9 A. M.

*Scientific Session:* 9:15 A. M.

4. Radiometry, Spectra and Sources. (Report of the Committee on Phototherapy and Apparatus.)

Frank T. Woodbury, M.D., New York, Chairman. Discussion opened by Donald C. Stockbarger, D.Sc., Mass. Institute of Technology, Cambridge, Mass. (by invitation), and Edgar Mayer, M.D., Saranac Lake, N. Y.

5. The Importance of Clear Fused Quartz in Science and Industry. Edward R. Berry, West Lynn, Mass.
6. Light Penetration and Physiological Responses. (Report of the Committee on Standardization of Physical Therapeutic Measures.) William T. Johnson, M.D., Philadelphia, Chairman.
7. Nomenclature in Physical Therapy. (Report of the Committee on Terminology.) Frank B. Granger, M.D., Boston, Chairman.
8. Safety Precautions in the Use of Electrotherapeutic Apparatus. (Report of Committee on Standardization of Therapeutic Apparatus.) Edward C. Titus, M.D., New York, Chairman.

TUESDAY AFTERNOON SESSION, 2 P. M.

9. What Not To Do With High Frequency Currents (Diathermy). (Report of Committee on Induced Currents and Apparatus.) Frederic DeKraft, M.D., New York, Chairman. Discussion opened by E. C. Titus, M.D., New York.

SYMPOSIUM ON CARDIOVASCULAR CONDITIONS

10. Are Electric Currents of Value in the Treatment of Cardiovascular Disease? Burton Baker Grover, M.D., Colorado Springs, Col.
11. Treatment of Clinical Decompensation of the Heart by Exercise. (Report of Committee on Therapeutic Exercise.) C. Ward Crampton, M.D., New York, Chairman.
12. Mechanical Vibration in Cardiovascular Conditions. (Report of Committee on Mechanical Vibration, Therapy and Apparatus.) Mary L. H. Arnold Snow, M.D., New York, Chairman.

    Discussions of Symposium opened by William Martin, M.D., Atlantic City.
13. Extremely Long Wave Length Roentgen Rays in Dermatology. Further Observations of Therapeutic Results. Joseph Jordan Eller, M.D., and Charles Lerner, M.D., New York. Discussion opened by Guy Lane, M.D., Boston, and A. W. Cheever, M.D., Boston (both by invitation).
14. Irradiation Therapy, 1928. (Report of Committee on Radiotherapy and Apparatus.) J. Douglas Morgan, M.D., Philadelphia, Chairman. Discussion opened by William H. Schmidt, M.D., Philadelphia.

TUESDAY EVENING SESSION, 8 P. M.

15. Studies in Electrothermic Penetration. (Report of Committee on Biochemistry.) Edwin N. Kime, M.D., Indianapolis, Chairman. Discussion opened by Frank B. Granger, M.D., Boston, and B. S. Price, M.D., New York.
16. Electro-Surgery. Edward H. Trowbridge, M.D., Worcester, Mass. (by invitation). Discussion opened by W. D. McFee, M.D., Haverhill, Mass.
17. The Treatment of Endocervicitis by Physical Energies. A. David Willmoth, M.D., Louisville, Ky. Discussion opened by Curran Pope, M.D., Louisville, and Edwin N. Kime, M.D., Indianapolis.

WEDNESDAY MORNING SESSION, SEPTEMBER 12TH

*Executive Session:* 9 A. M.

*Scientific Session:* 9:15 A. M.

SYMPOSIUM ON POLIOMYELITIS

18. Etiology Symptoms and Medical Treatment of Anterior Poliomyelitis. Lewis W. Hill, M.D., Boston (by invitation).
19. Anterior Poliomyelitis. William Benham Snow, M.D., New York.

    Discussion opened by Frederick E. Garland, M.D., Boston (by invitation), Frederic DeKraft, M.D., New York, and Lucy Osborn Wight, M.D., New York.

    Discussion opened by Frederic DeKraft, M.D., New York, and Lucy Osborn Wight, M.D., New York.

SYMPOSIUM ON HYDRO- AND THERMOTHERAPY

20. Mode of Action of Thermotherapy. Paul Roth, M.D., Battle Creek, Mich. (by invitation).
21. Physiological and Therapeutic Results of the Hot Tub Bath, Hot Blanket Pack and Alternating Hot and Cold Shower. J. W. Torbett, M.D., Marlin, Tex.
22. Hydrotherapeutic Technic in Pneumonia. (Report of Committee on Hydrotherapy, Thermotherapy and Apparatus.) W. H. Dieffenbach, M.D., New York, Chairman.
23. A New Whirlpool Bath for Institutions; also a Whirlpool Full Bath to Be Used as a Substitute for the Nauheim Bath. Curran Pope, M.D., Louisville, Ky.

    Discussion of Symposium opened by William T. Johnson, M.D., Philadelphia.

WEDNESDAY AFTERNOON SESSION, 2 P. M.

SYMPOSIUM ON GOITER

24. Nonsurgical Goiter. Israel Bram, M.D., Philadelphia (by invitation).
25. Surgical Aspect of Exophthalmic Goiter. Frank H. Lahey, M.D., Boston (by invitation).
26. Thyrotoxicosis Treated by Physical Therapy Methods. H. G. Wahlig, M.D., Seacliff, N. Y.

    Discussion opened by S. Solis Cohen, M.D., Philadelphia; Frederick W. O'Brien, M.D., Boston; Charles Allen Porter, M.D., Boston (all by invitation), and by William Benham Snow, M.D., New York.
27. Some Teaching Courses in Physical Therapy. (Report of Committee on Education in Physiotherapy.) A. Bern Hirsh, M.D., New York, Chairman. Discussion opened by F. B. Granger, M.D., Boston; William T. Johnson, M.D., Philadelphia; J. C. Elsom, M.D., Madison, Wis., and E. N. Kime, M.D., Indianapolis.
28. Modern Trends in Dietetics. (Report of Committee on Dietetics.) Madge C. L. McGuinness, M.D., New York, Chairman.

*Annual Business Meeting:* 4:30 P. M.

WEDNESDAY EVENING, 7 P. M.

*Annual Banquet.* Toastmaster: Curran Pope, M.D., Louisville.

THURSDAY MORNING SESSION, SEPTEMBER 13TH

*Scientific Session:* 9 A. M.

29. The Direct Current: Factors Essential to Its Therapeutic Application. (Report of Committee

on Direct Continuous Currents and Apparatus.) E. G. Waddington, M.D., New York, Chairman. Discussion opened by F. H. Morse, M.D., Boston, B. B. Grover, M.D., Colorado Springs, and E. C. Titus, M.D., New York.

30. A Hydrostatic Electrode. Lee A. Hadley, M.D., Syracuse, N. Y. Discussion opened by A. David Willmoth, M.D., Louisville, Ky.
31. Co-ördinated Physical Therapy in the Hospital. Spencer T. Snedecor, M.D., Hackensack, N. J. Discussion opened by Charles R. Brooke, M.D., Newark.
32. Raynaud's Phenomena Treated by Physical Measures. Charles R. Brooke, M.D., Newark, N. J. Discussion opened by William Benham Snow, M.D., New York, and George J. Ott, M.D., Boston.
33. Title to be announced. A. E. Kennelly, Ph.D., Harvard University, Cambridge
34. Diathermy in Gynecology. William H. Guillium, M.D., Asbury Park, N. J. Discussion opened by Mortimer N. Hyams, M.D., New York (by invitation), and A. David Willmoth, M.D., Louisville, Ky.

THURSDAY AFTERNOON SESSION, 2 P. M.

35. Physical Treatment in Constipation (with lantern demonstration). George J. Ott, M.D., Boston. Discussion opened by Herman A. Osgood, M.D., Boston (by invitation).
36. A New Concept for the Prevention of Gall Stones. Arthur Linwood Brown, M.D., Winchester, Mass. Discussion opened by Fred B. Lund, M.D., Boston, and Edward N. Libby, M.D., Boston (both by invitation).
37. The Treatment of Secondary Ulcerative Tuberculosis of the Intestines with Artificial Light. Edgar Mayer, M.D., Saranac Lake.
38. Treatment of Hypertrophic Rhinitis. Louis Feldman, M.D., Boston (by invitation). Discussion opened by Samuel Cline, M.D., Boston, and Harry Schwartzman, M.D., Boston (both by invitation).
39. Electrosurgical Removal of Tonsils. M. A. Cohen, M.D., Boston.
40. Recent Studies in Static Electricity. (Report of Committee on Static Currents and Apparatus.) William Benham Snow, Jr., M.D., New York, Chairman.
41. Light Integral in Life. (Communication.) Foveau de Courmelles, M.D., Paris, France.

FRIDAY, SEPTEMBER 14TH, A. M. AND P. M.

9 A. M., Visit to the River Works of the General Electric Company at West Lynn, Mass. Demonstration of technical and laboratory facilities.

10 A. M. to 12 noon, Boston City Hospital, service of Frank B. Granger, M.D. Visit to the new department of physical therapy and wards. Demonstration of technic.

2 to 4 P. M., Children's Hospital, Nerve Department. Demonstration of treatment of birth palsies.

## SOCIETY MEETINGS

**September 10-14**—American Electrotherapeutic Association. Entire program appears on page 499, this issue.

**September 18, 19, 20**—Fourth Clinical Congress, Connecticut State Medical Society. For detailed notice see page 394, issue of August 23.

**September 24-28**—Sixth Conference of the International Union Against Tuberculosis. For complete notice see page 349, issue of August 16.

**October 1-12**—The Graduate Fortnight of the New York Academy of Medicine. For complete notice see page 396, issue of August 23.

**October 8-12**—Clinical Congress of the American College of Surgeons. For complete notice see page 499.

**October 15-19**—Interstate Post Graduate Association. Complete notice on page 1025, issue of June 28.

**December 3-7**—Radiological Society Convention. Detailed notice appears on page 712, issue of May 17.

## DISTRICT MEDICAL SOCIETIES

### Barnstable District Medical Society

Schedule of Meetings: November 1, 1928, February 7, 1929, May 2, 1929.

### Berkshire District Medical Society

The especial features of the October meeting will be addresses by Dr. George Crile of Cleveland, Dr. Emil Novak of Johns Hopkins, Dr. Willis Campbell of Memphis, Tennessee, and Dr. Thomas Ordway of Albany, N. Y. A complete program will be published later.

HUGH J. DOWNEY, Secretary.

### Bristol North District Medical Society

**September 21**—Fall meeting. Place to be determined later.

**April 18, 1929**—Spring meeting.

### Bristol South District Medical Society

Meetings will be held November 7, 1928, and May 2, 1929. Complete notice will appear later.

### Essex North District Medical Society

**October, 1928** (Wednesday afternoon)—A joint meeting with Middlesex East and North, and Essex South. Date and place to be announced.

**November 1, 1928** (Thursday)—Censors meet at Hotel Bartlett, 95 Main Street, Haverhill (Tel. 3430), at 2 P. M.

**January 2, 1929** (Wednesday)—Semi-annual meeting at Haverhill, at 12:30 P. M.

**May 1, 1929** (Wednesday)—Annual meeting at Lawrence, at 12:30 P. M.

**May 2, 1929** (Thursday)—Censors meet at Hotel Bartlett, 95 Main Street, Haverhill, at 2 P. M. (Tel. 3430.)

### Middlesex East District Medical Society

The following schedule of meetings has been arranged for the coming year:

**September 12**—Winchester Country Club.
**October 17**—Middleton. (Joint meeting with Essex North and South and Middlesex North.)
**November 14**—Woburn.
**January 16**—Wakefield.
**March**—Reading.
**May**—Melrose.

Subjects and speakers to be arranged by committees in each city or town.

### Middlesex North Medical Society

**October 17**—A combined meeting with Essex North and South.

The winter meeting will be held the last Wednesday in January.

The annual meeting will be held the last Wednesday in April.

### Norfolk District Medical Society

Below are the proposed meetings of the Norfolk District Medical Society for the 1928-29 Season. The schedule below will be adhered to as strictly as possible. The carrying out of the proposed plan will, of course, depend upon the acceptances of invitations extended to the speakers. Minor changes may be necessary.

**October 30**—Pondville Hospital. Dr. Lyman F. Jones, Superintendent. Inspection, 4 P. M.; Business Meeting at 5:30; Papers by the Staff; Collation.

**November 21**—Boston Medical Library. In combination with Suffolk District and Middlesex East District Societies. Subject, Physiotherapy—Dr. F. B. Granger.

**January 29**—Roxbury Masonic Temple. Subject, Treatment of Varicose Veins by the Injection Method—Dr. E. E. O'Neil. Dr. Homans will open the discussion.

**February 26**—Roxbury Masonic Temple. Dr. W. R. Ohler. Subject to be announced. Discussion to be opened by Dr. A. A. Hornor.

**March 26** — Roxbury Masonic Temple. Subject and speakers to be announced.

**May, 1929**—Annual meeting program to be announced.

The Censors of the Society meet November 8, 1928, and May 9, 1929, at the Roxbury Masonic Temple, Warren Street, Roxbury, at 4 P. M., for the examination of candidates.

## BOOK REVIEWS

*Methods and Problems of Medical Education.* Ninth Series. Institutes of Legal Medicine. Rockefeller Foundation, 1928.

This number of the useful series published by the Rockefeller Foundation on medical education deals with the medicolegal institutes and the various systems in use in the different countries. There are numerous illustrations and floor plans. One is impressed by the outstanding pre-eminence of the European countries in this important field. Of particular interest are the sections on the Massachusetts medicolegal system by Dr. Timothy Leary, and the New York City system by Dr. Charles Norris.

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*A Manual of the Practice of Medicine.* Prepared especially for students. By A. A. STEVENS, A.M., M.D. Twelfth Edition, Revised. Published by W. B. Saunders Co., Philadelphia and London. 658 pages.

This book is exactly what it pretends to be, namely—a manual of the practice of medicine prepared especially for students. It is purposely short and elementary. It is complete and up-to-date and has the same authoritative standing as the two other books by the same author, namely—"The Practice of Medicine" and the "Textbook of Therapeutics".

One wonders however if there is a real place for such a book. It would be of questionable wisdom to urge its use on students preparing for examinations, and if either student or practitioner were looking up a particular disease he would want at least as much information as is given in the more complete one-volume works on the practice of medicine.

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*The Heart in Modern Practice.* By WILLIAM D. REID, M.D. Second Edition. J. B. Lippincott Co., Philadelphia.

The revised and enlarged edition of this book has been increased in size from 352 pages to 466 largely by the addition of material relative to the arrhythmias of the heart and their graphic registration. The book serves as an introduction to the study of heart disease in condensed form. It cannot be considered a reference source since its size allows but brief notes upon many important phases of the subject. This has led to a certain lack of balance in different parts of the book, for example whole chapters are devoted to the rare conditions of sino-auricular block and ventricular fibrillation while only a page and a half is given to the increasingly important subject of coronary infarction; twice as much space is given to the description of the signs of patent foramen ovale, which is very rarely diagnosed during life, as to the discussion of patent ductus arteriosus, a relatively common congenital heart lesion usually easy to diagnose by the continuous murmur at the base of the heart to the left of the sternum, mention of which is not made in this book,

Various typographical errors have crept into this edition and one of the electrocardiograms has been incorrectly lettered and inverted. The illustrations are well chosen, however, and the arrangement of the book is much more satisfactory than in many works on heart disease in the past, following as it does the development of knowledge and ideas on the subject during the past generation. The discussion of structural lesions which in the past has sometimes filled the bulk of books on heart disease is here dismissed all too briefly.

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*Lobar Pneumonia—A Roentgenological Study.* By L. R. SANTE, M.D. With a foreword by James T. Case, M.D. Published by Paul B. Hoeber, Inc., New York. 137 pages.

This monograph is in a sense a plea for the use of the X-ray in research on lung diseases in general. The particular problem of the book is a Roentgenological study of lobar pneumonia in the attempt to "correlate Roentgen Ray findings with clinical and pathological manifestations".

The book is short, concise, and well written. The diagrams are clear and the reproductions of the X-ray plates are for the most part satisfactory.

The author deals in some detail with the use of the X-ray in the early diagnosis of pneumonia, in the localization of the pneumonic process in a particular lobe, the diagnosis of atypical pneumonic processes such as "hilum pneumonia", differential diagnosis, and the early discovery of complications.

The particular original contribution is the evidence from X-ray that the adult type of pneumonia starts at the hilum and progresses outward the periphery, in contradistinction to the onset in children where the disease seems to start at the periphery and spread toward the hilum.

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*Studies from the Rockefeller Institute for Medical Research.* Published by The Rockefeller Institute for Medical Research, New York. Reprints, Volume LXIII. 626 pages.

This volume from the Rockefeller Institute consists of reprints of articles which have appeared in other publications. There are fifty papers with altogether forty-five contributors. Prominent among these latter are Theobald Smith and Alexis Carrel.

The papers are from the departments of Pathology, Bacteriology, Bio-physics, Chemistry, Experimental Surgery, General Physiology, and Animal Pathology. Completeness and accuracy are characteristics of them all.

No one person can properly evaluate research from so many fields. From the standpoint of clinical medicine and the special field of the reviewer, particular interest attaches to a paper by Doan and Sabin showing that in rabbits massive intravenous injections of tubercle bacilli give a marked involvement of the bone marrow in the early acute phase; and a paper by Tillett showing that in rabbits increased resistance against virulent Type III pneumococci may be stimulated by repeated injections of heat-killed cultures.

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*Diseases of the Intestines and Lower Alimentary Tract.* By ANTHONY BASSLER. Third Edition. Published by the F. A. Davis Company of Philadelphia.

This is a good book. Much new material has been added, including chapters on the diseases of the liver, gall bladder, and pancreas. The available data concerning diseases of the field covered have been organized in a very accessible way. There is an unusual wealth of illustrations—photographs, skiagrams and diagrams. Physiology, pathology, clini-

cal signs and symptoms, diagnosis and treatment are exceptionally well covered. Parasitology is elaborately handled. Like all books dealing with the diseases of only one of the great systems of the body its chief value lies in bringing together the available information about each subject. It is a useful addition to the armamentarium of any physician, especially to the internist.

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*Nouveau Précis de Bactériologie.* DELATER, G., and GRANDCLAUDE, CH. Edited by Gauthier-Villars et Cie, 1928. Pp. 124.

This elementary manual of bacteriology is divided into two sections; the first dealing with the general characteristics of bacteria; and the second with the differentiation of various important species. There are a number of illustrations which are helpful for those who might wish to learn bacteriological technique for themselves, but rather superfluous for those having the benefit of instruction.

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*Traité de Physiologie Normale et Pathologique.* Vol. IV. Masson et Cie., Editeurs, Paris, 1928. Pp. 557.

This volume of the series of monographs on physiology takes up the internal secretions. Of particular interest is the section on the internal secretion of the pancreas by Hedon which presents in clear and easy style our knowledge of the relation of carbohydrate metabolism to the pancreatic secretion. Naturally many references are to the French literature, much of which is but lightly touched on in many English texts.

A very interesting section in which knowledge and speculation are combined is that on the spleen by Abelous. Apparently there is no great difference, so far as these monographs reflect, among the current theories here and in France.

Perhaps the keynote of this book might be given in the second sentence of the section on the pineal body, which may be freely translated as, "In spite of lack of certain knowledge, nevertheless one may console himself with possibilities if not probabilities".

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*The Medical Department of the United States Army in the World War.* Vol. IX. *Communicable and Other Diseases.* Prepared under the direction of MAJ. GEN. M. W. IRELAND, The Surgeon General, by LIEUT. COL. JOSEPH F. SILER, M. C., U. S. Army. Washington: U. S. Government Printing Office 1928.

This valuable contribution to preventive medicine deserves a different fate from that which a government document usually meets.

It is a comprehensive work. In its 700 pages one finds concisely recorded the methods whereby a mob of three million raw recruits of widely diverse geographical and racial derivations were quickly turned into a military organization with the lowest degree of "non-effectiveness" from communicable diseases that the world has ever seen.

Where brilliant success was attained, as with respect to typhoid fever and other gastro-intestinal infections, smallpox, malaria, skin diseases and intestinal parasites, one learns how it was accomplished.

Where preventive measures failed as with infections of the respiratory tract one may gain a clearer conception of the problem of their prevention.

No better treatise can be found anywhere on the one troublesome cause of "non-effectiveness" in civil as well as military life than the chapter on Neurocirculatory Asthenia.

It is wrong to consider military experience in preventive medicine as chiefly serviceable for military purposes. The teachings of this experience have been too long neglected in dealing with the common problems of municipal health.

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*The Use of Symptoms in the Diagnosis of Disease.* By HOBART AMORY HARE, B.Sc., M.D., LL.D. Ninth Edition, Revised. Published by Lea & Febiger, Philadelphia. 528 pages.

This book is of value largely because of the emphasis which it places on the importance of symptoms and physical examination in the diagnosis and treatment of disease. It should stimulate both students and practitioners to a much closer observation of the *patient.*

As a reference book it is not as useful as a number of other works since although it has some of the features of all of them, it is neither a handy book on differential diagnosis, a complete work on physical diagnosis, or a satisfactory text on neurology.

The more recent medical graduates will be somewhat surprised to find frequent use of such terms as "diathesis", "marasmus", and "cholera infantum".

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*A Text-Book of General Bacteriology.* EDWIN O. JORDAN. W. B. Saunders Company, ninth edition, 1928. P. 778.

Jordan's Bacteriology, now in its ninth edition, is one of the standard American text-books on this subject. Its popularity is evident from the fact that each year of the last twenty has seen a new printing or a new edition of this book. For the present edition the section on parasite protozoa has been rewritten and the other sections revised to bring them up to date.

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*Urinary Analysis and Diagnosis.* By LOUIS HEITZMAN, M.D. Fifth Revised Edition. William Wood and Company. New York. 1928.

The book deals exclusively with a description of the urine and its place in diagnosis. There is first a brief review of the histology of the kidney and an account of urinary secretion; then follows a general description of the urine. Normal and abnormal constituents, chemical and biologic (microscopic) occupy the greater portion of the book. Pathology and urinary diagnosis of the genito-urinary tract is the final portion of the book except for a chapter on renal functions tests by Dr. Dannreuther.

For these who search for details not found in the ordinary book this book will prove valuable. The practitioner, on the other hand, can find sufficient material in a good book on laboratory methods. A valuable feature of this book are the numerous illustrations, careful scrutiny of which will lead to greater familiarity with urinary sediments.

The classification of the pathology of nephritis based on urinary and even clinical findings are notoriously difficult to predict, so much so that many clinicians have relegated such classification to the pathologist and have formulated a clinical grouping as a working classification. Thus many would

take exception to the statement that "The features of this (cirrhosis of the kidney) as seen in the urine are so characteristic that a positive diagnosis can always be made". Among the conditions in which the nitrogen output is increased hyperthyroidism is not mentioned. The passive congestion of cardiac decompensation should be included under the causes of kidney congestion. With the exception of the misspelling of Rowntree's name the book is free from typographical errors.

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*Operative Surgery.* J. SHELTON HORSLEY. C. V. Mosby Co.

This new edition is brought up to date by well thought out emphasis on important recent developments in surgical technique. Routine surgical procedures are treated in such a manner as to illustrate only the common errors that might be dangerous to the success of an operation, giving the experienced surgeon logical reasons for abandoning a detail that may save his patient's life, or a new idea that may facilitate the everyday operation. Enough detail is given to aid the infrequent operator, but this work is not an elementary text. The details of many ingenious operations developed by the author are given. The chapters on Arterial Surgery are complete and of special value. The volume is well illustrated.

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*Die Chirurgie.* M. KIRSCHNER, O. NORDMANN. Chirurgie der Haut und des Unterhautzellgewebes. (With 46 illustrations and 29 colored plates.) Berlin, 1928.

This is the second volume of a system of surgery It deals with the anatomy and physiology of the skin and has good diagrams. Congenital conditions, various type of burns, infections and tumors are discussed from the point of view of causative agent, diagnosis and treatment. Many of the illustrations are excellent. On the whole the colors in the colored illustrations are fairly true to life. The text is much more complete than the ordinary discussions of skin conditions.

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*The Newer Knowledge of Bacteriology and Immunology.* JORDAN, E. O., and FALK, I. S. University of Chicago Press, 1928. Pp. 1196.

Eighty-two workers in all fields of bacteriology have contributed to this volume. It is in no way similar to the ordinary textbook of bacteriology but concerns itself with reviews of those topics particularly interesting at the present time, the material of which is widely scattered and not accessible in any convenient form. Particularly interesting are the sections on "The Chemical Structure of Bacteria" by Baumgärtel, "Morphological Changes During the Growth of Bacteria" by Clark, "The Rise and Fall of Bacterial Populations" by Winslow, "Mechanical and Engineering Aspects of Pasteurization" by Putnam, "The Bacteriophage" by Bronfenbrenner, "Communicable Diseases of Laboratory Animals" by Meyer, "Antigenic Properties of the Bacterial Cell and Antibody Reactions" by Zinsser and Mueller, "The Mechanism of Agglutination" by Northrop, and "Venoms and Antivenins" by Amaral. These by no means represent all the subjects taken up in this volume but are simply those which appeal more particularly to the reviewer, and which are but lightly touched on in the orthodox textbook of bacteriology.

A book of this type is both refreshing and exasperating: refreshing, in that it presents many new and interesting viewpoints; exasperating, in that it emphasizes the almost chaotic condition of some fundamental aspects of the science, such as nomenclature for example, and because it brings home the realization that even in a single very limited field of medical knowledge it is impossible for the average worker to be familiar with all aspects.

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The JOURNAL does not publish the price of books received for review because of Postal regulations. Requests for this information addressed to the JOURNAL office will receive early attention.

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## BOOKS RECEIVED FOR REVIEW

*Goiter Prevention and Thyroid Protection.* Edited by Israel Bram, M.D. Published by F. A. Davis Co. 327 Pages.

*A Manual of Tuberculosis Legislation.* Edited by James A. Tobey, LL.B., Dr.P.H. Published by National Tuberculosis Association. 86 Pages.

*Rules for Recovery from Tuberculosis.* Edited by Lawrason Brown. Published by Lea & Febiger. 244 Pages.

*Diseases of the Gall Bladder and Bile Ducts.* Edited by E. Graham, Cole, Copher, and Moore. Published by Lea & Febiger. 477 Pages.

*Modern Medicine.* Edited by William Osler. Published by Lea & Febiger. 964 Pages.

*Pharmacology and Therapeutics.* Edited by Arthur R. Cushny. Published by Lea & Febiger. 743 Pages.

*Diabetes Mellitus.* Edited by Elliott P. Joslin. Published by Lea & Febiger. 1006 Pages.

*Constitutional Inadequacies.* Edited by Nicola Pende. Published by Lea & Febiger. 270 Pages.

*Blood and Urine Chemistry.* Edited by R. B. H. Gradwohl. Published by C. V. Mosby Co. 542 Pages.

*Recent Advances in Chemistry in Relation to Medical Practice.* Edited by W. McKim Marriott. Published by C. V. Mosby Co. 141 Pages.

*Diabetic Manual for Patients.* Edited by Dr. Henry J. John. Published by C. V. Mosby Co. 202 Pages.

*Ultra-Violet Rays in the Treatment and Cure of Disease.* Published by C. V. Mosby Co. 236 Pages.

*The Determination of Hydrogen Ions.* Edited by William Mansfield Clark. Published by Williams & Wilkins Co. 717 Pages.

*Studies on Scurvy.* Edited by Arthur W. Meyer and Lewis M. McCormick. Published by Stanford University Press. 108 Pages.

*Calcium Therapy.* Edited and published by John Aulde, M.D. 420 Pages.

*The Surgical Clinics of North America.* Published by the W. B. Saunders Company. 219 Pages.

*The Eye.* Edited by C. W. Rutherford. Published by D. Appleton and Company. 404 Pages.

*The Nose Throat and Ear.* Edited by John D. Barnhill, M.D. Published by D. Appleton and Company. 604 Pages.

*The Heart in Modern Practice.* Edited by William Duncan Reid. Published by J. B. Lippincott Company. 466 Pages.

*Chirurgie de L'Estomac et Du Duodenum.* Edited by Henri Hartmann. Published by Masson et Cie, Editeurs. 340 Pages.